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TO THE PATRONS OF THE COACHMAKERS INTERNATIONAL JOURNAL.

COACH-MAKERS'

INTERNATIONAL JOURNAL,

DEVOTED

Exclusively to the Interests of the Trade.

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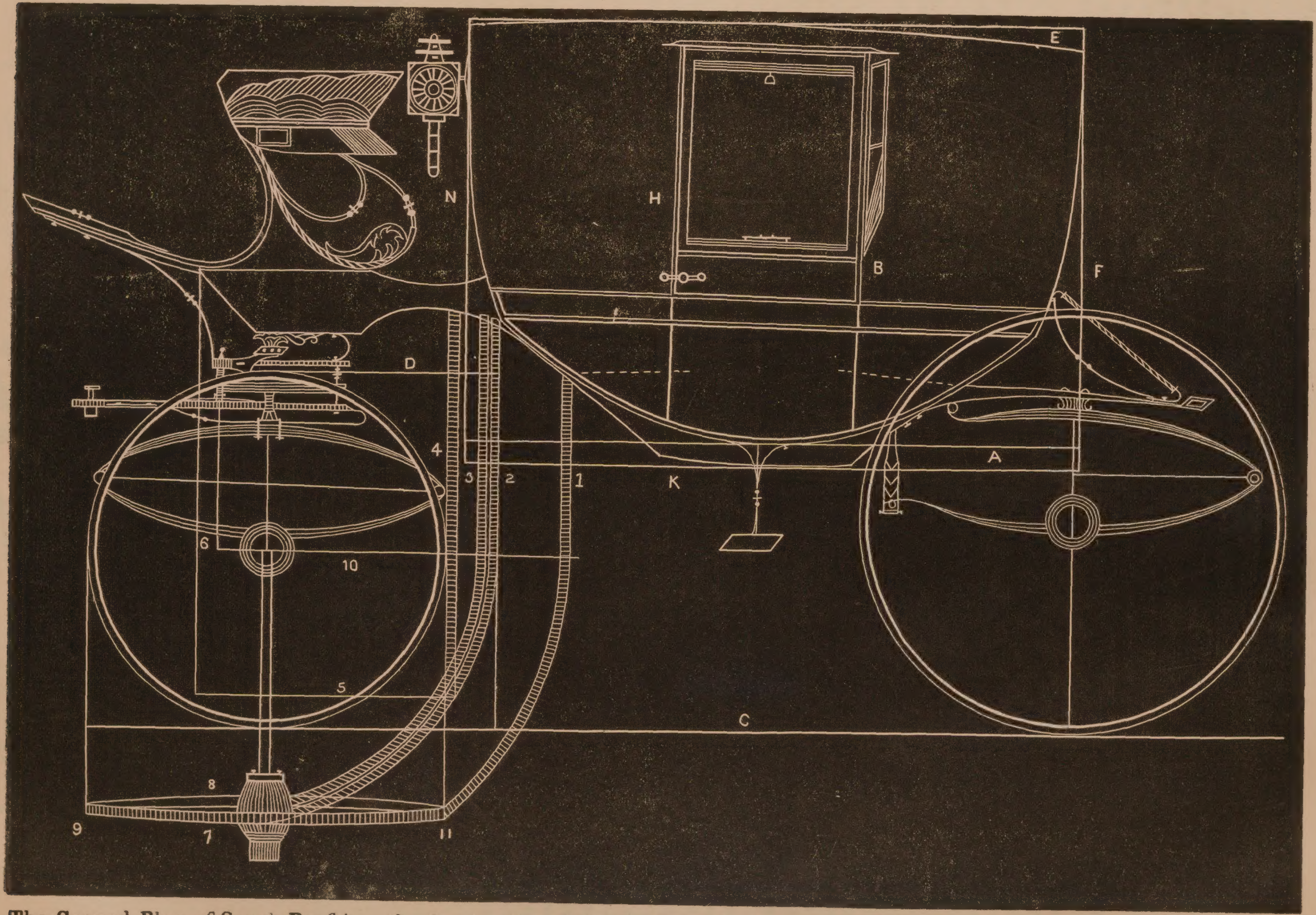


The Ground Plan of Coach Drafting, the Laying Out of the Carriage Part Height of Wheels, and Turning under of the same.

THREE-QUARTER INCH SCALE.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. IV.—NO. 1. OCTOBER, 1868. $3.00 PER ANNUM Always in Advance.

PROGRESS.

We trust we shall not be charged with egotism when we say that we feel proud of the JOURNAL in its enlarged and improved appearance.

The emotions of pleasure awakened, arise from the fact that our feeble efforts to satisfy the ever-increasing demands of the trade in our vast country have been so highly appreciated. We experienced a difficulty the past year in the want of sufficient room to properly display our engravings and designs on account of the smallness of our pages; hence the change in size.

Having received, the past year, such a marked appreciation of our efforts to furnish the craft with a live publication, devoted to their interests, we feel, in justice to our patrons, no efforts on our part should be spared to make the JOURNAL, in appearance, size and style, second to none on this continent, and, be assured, there shall not. We have, therefore, at a heavy expense, made the change; and the slurs and remarks that have come from certain parties, jealous of our success, regarding the style of the JOURNAL, can no longer have any weight.

We now have the *largest* and most beautiful work of the kind published, and as to the contents we have no fears of the judgment rendered by an intelligent public.

We are indebted to Mr. Veatch for the beautiful and original design of our cover. While he has maintained a neatness and simplicity throughout, there is no lack of artistic skill displayed. In his description he says: "The border is formed principally of straight lines, with but a few simple curved lines and leafing at the corners and ends of the side bars. The corner pieces are drawn on a square of about half an inch, varied by the use of the circle. The vine and leafing at the sides are of an oval or elliptical form. The circular picture represents Neptune, the brother of Jupiter, who was second in rank among the gods, and reigned over the sea. Neptune is represented as seated in a chariot made of a sea shell, and drawn by dolphins and sea horses, surrounded by tritons, nymphs and sea monsters. On his head he wears a crown, and in his hand he holds a trident, or sceptre of three prongs.

We have used only a part of the original, leaving out the tritons, nymphs and sea monsters, and adding one horse. The four horses represent the four distinct branches of the trade of coach-making." Below we give a landau of the latest style, drawn on the block to the scale by our regular carriage draughtsman.

Few of our readers, doubtless, have any correct idea of the cost of drawing and engraving so small a matter as the cover of the JOURNAL. Our fashion plates are now printed on a beautiful tint, with an original neat border, engraved expressly for the JOURNAL, thereby depriving a publisher of Egyptian and Assyrian *carriages* the opportunity of bringing the JOURNAL to notice on that account. As a whole, we think we have succeeded in producing a work pleasing and acceptable to all.

The JOURNAL has, at a trifling cost, carried the latest styles of work far into the interior of almost every State in the Union and the Canadas. Monthly its pages have been scanned by eager employers and journeymen scattered over the country, and awakened a more lively interest among that class of manufacturers who are so far distant from the large cities that they have heretofore had no opportunity of keeping themselves regularly posted up in the latest improvements.

The city and country have, as it were, been brought together, and while the heavy manufacturers in the large cities may not have reaped any great benefit from the publication of their styles, nevertheless, the fact that they have contributed to the tastes and wants of the people at large, and are looked up to as leaders in the art of coach-making, should, we think, be a source of much gratification to them. How different from the old style of buggies and heavy carriages are the vehicles which we now see built, even at the smallest shops in the country! The old-fashioned, heavy, ill-shaped and lumbering buggies built a few years ago look now as if the people in earlier times were fearful their horses would not earn their oats, unless they were loaded down with a thing called a buggy heavy enough to haul saw logs in.

Again, look at an old-fashioned falling-top barouche; why, they were regular creek straddlers; the body, perched up in the air, was narrow and cramped up; the wheels low and heavy; there was no form or comeliness about them. How different are the graceful forms now to be seen in every section of the country. The styles of work have become so attractive that the most careless observer of passing vehicles on the street cannot help pausing to look at and admire the floating beauties, as they dash by, with horses, harness, and all in good keeping.

We imagine we hear an old-time carriage coming in the distance. Listen; rackety-e-tack, tack, rackety tack tack, burr-rur, rub-a-dub, rub-a-dee, bum bum, making day or night hideous with its bumping, thuding, and rattle-te-clack clacking sound. Now, a heavy coach glides quietly down the bouldered street, and passes out of hearing, leaving no such unpleasant sensations.

What has caused so great a change within the last few years? We answer, the untiring energy of the city manufacturers, and the diffusion of the fruits of their labors over the country by means of a publication devoted specially to the interests of coach-makers. We behold with pleasure the coach-makers waking up to a sense of their need of all the aid that can be furnished in the manufacture of work suitable to the times. We are continually receiving letters of inquiry about improvements advertised, which proves that the present attainments are not satisfactory, and that any new and valuable

Fashion Plates Explained.

C SPRING CENTRAL-PARK PHÆTON.

Plate No. 1.—This engraving represents a C Spring Half-top Phæton, and we think it well calculated to meet the wants of our patrons. Dimensions, body 34 inches on the bottom, 37 inches on top; this allows 1½ inches bevel on each side. Seat skirting to project 1½ inches from the body. Side bevel to receive 3 feet 11 inches or 4 four feet bows. The back seat has a solid high back 21 inches; front inside seat a drop lid. Boot falls back of body, which is 32 inches wide. The round boot is formed by circular pieces, taken from whitewood or poplar, 2 or 3 inches thick, and glued one on top of the other, until the desired height is obtained; when dry, is cleaned off and covered with either raw hide or duck, the front coming under the duster, the bottom edge covered by a neat moulding, as shown by a white line on the boot. Painting: the belt, seats and arch, or cut under, English purple lake; seat skirts and panels of body, deep rich green; the green to be mixed of Dutch pink and Prussian blue, which will have to be laid on a ground-work, as the Dutch pink is very transparent; the boot and margins, black; the belt, mouldings and seat skirts, traced with a fine line of gold or bronze; carriage part, painted with either of the body colors, as may suit the taste of the painter. We would prefer the lake, made one or two shades lighter by the addition of Munich lake, striped with three-eights broad line of Bismarck, edged, fine line of black, front of spokes filled in solid, diamond pattern, edged with gold or bronze. Black, judiciously distributed over the gearing, will help to enrich the colors, and, by contrast with them, be pleasing to the eye.

Trimming: cloth; axles, inches; front springs, 40 inches long, five plates, 1¾ inches, 12 inch-opening; hind springs 40 inches long, five plates, 1¾ inches, 11-inch opening; C springs 1¾ inches, five plates. These springs are set on the line of body, with a single back bar; the elliptic underneath 2½ inches outside; hubs 5⅛ inches in diameter; length 8 inches; front band 3¾ inches; back band 4⅜ inches; spokes 1½ inches; tire 1¼ by ⅜ inch; wheels 3 feet 6 inches and 4 feet. In the way of lamps, the topaz light is very stylish.

SIX-SEAT EXTENSION-TOP.

Plate No. 2.—A very light and neat design, with a genteel driver's seat. Lightness seems to be the desire of some customers, and also to have a family carriage with a genteel driver's seat, where they may drive themselves, without being considered a coachman.

Dimensions, width of body over all 38 inches; 2 inches turn under; side bevel of seats to take 3 feet 10 inch bows; body paneled, short bottom side back and front of door; doors cut through and shut against the rocker; mouldings chamfered. The panel underneath the driver's seat on a line with the rocker. Painting: belt and seats, Bismarck; the other panels, black; edges of seats, striped with quarter inch line of black. Carriage part, painted Bismarck; striped quarter inch line black; distant fine line of the same; fronts of spokes and hubs, fine line of gold, instead of black. Trimming: blue, indigo dyed cloth. Axles, 1⅜ inches; back springs, five plates, 1¾ inches, 40 inches long, 12 inches open; front springs, five plates, 1¾ inches, 40 inches long, 11 inches open; hubs 8 inches long, 5⅛ inches diameter; front band 3¾ inches; back band 4⅜ inches; spokes 1½ inches; tire 1¼ by ⅜ inch; wheels 3 feet 4 inches and 4 feet.

GE TLEMAN'S PHÆTON.

Plate No. 3.—This design represents a beautiful and stylish vehicle, or properly called a gentleman's phæton. It would be difficult to get a design more suitable for this class of phæton. The back seat to turn in or out, suitable for two or four persons. The top is made on a shifting rail, which can be moved, forming a no-top.

Dimensions, width of body 33 inches. Painting: the belt and seats, dark brown. This is a raised belt about 3-16 chamfered edge, to receive a gold stripe. The other panels black. Carriage: carmine, striped with gold. Trimming: cloth. Axles, 1¼ inches; springs, 1½ inches, four plates, 37 inches long; hubs, 4⅝ inches diameter, 7 inches long; front band, 3¼ inches; back band, 3⅞ inches; spokes, 1¼ inches; tire, 1 inch by ¼ inch; wheels, 3 feet .3 inches and 4 feet.

MARQUETTE BUGGY.

Plate No. 4.—As a design for a buggy is always acceptable, we insert this, and think it equal to any of the excellent ones that we have given. Dimensions, width of seat for top 30 inches; raised belt 3-16, passing around the body; chamfered on the edge; this being the new style of finish that is now being introduced.

Painting: belt and seats, deep sea-green; chamfered edges, striped gold; the other panels black. Carriage: black, striped with ⅛ line deep green, and fine lines of gold or bronze at distance. Trimming: cloth. Axles, ⅞ inch, steel; back spring, 38 inches long, three plates, 1½ inches, 9½ inches open; front spring, 37 inches long, three plates, 1½ inches, 9 inches open; hubs 3¾ inches, 6 inches long; front band 2½ inches; back band 3½ inches; spokes 15-16; tire ⅞ by ⅛; wheels 4 feet and 4 feet 2 inches.

Journeymen bakers in San Francisco receive from $40 to $50 per month, and board; barbers the same; cooks, from $30 to $60; and wagon makers, $4 per day, or from $50 to $60 per month, with board. The circulating medium, be it remembered, is gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

For the Coach-Makers' International Journal.

STRAY STEPS OF A TRAMPING JOUR.

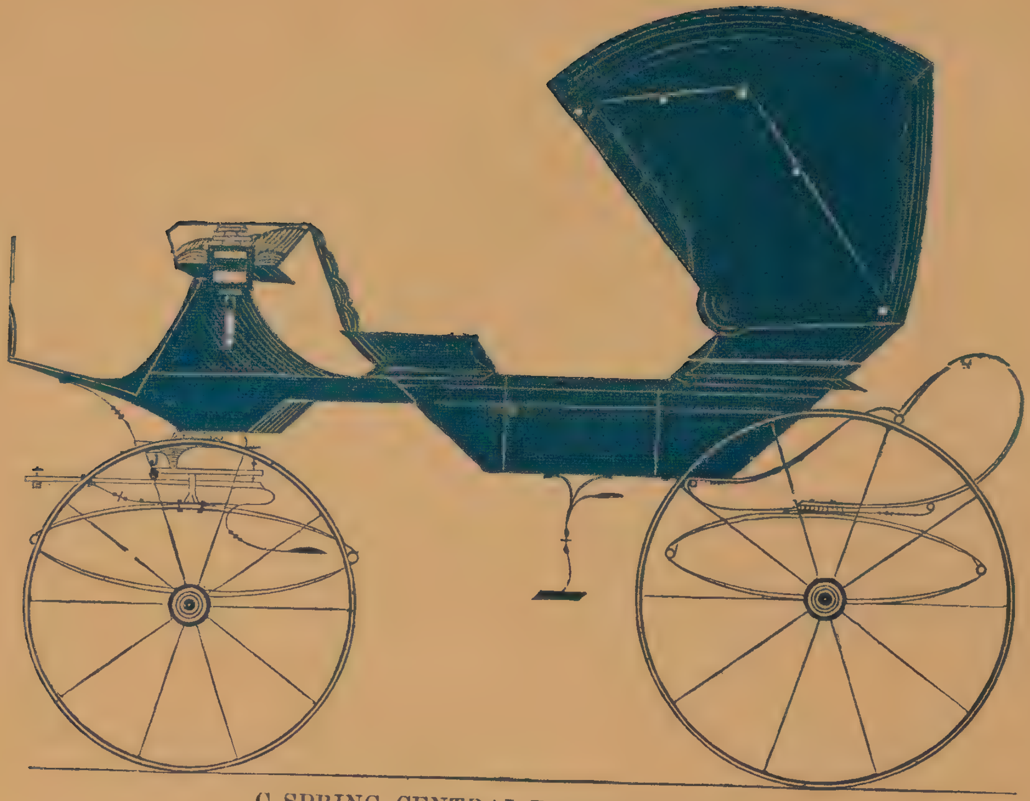
BY FRED. PUMICE.

MOVING.

Money, as usual, being scarce with me, I had to remain in Humphport until I could "*raise a stake*," this being a Westernism for money enough to go on a tramp again, and money I must have very soon, for as I said in my last, (in No. 12, Vol. 3,) my mind was made up to "git up and git" from these diggins, so I told Mr. Lottsell that I would want to get all that he owed me, that I might go to Cincinnati, for the purpose of bringing on my folks to Humphport, where I intended to settle down.

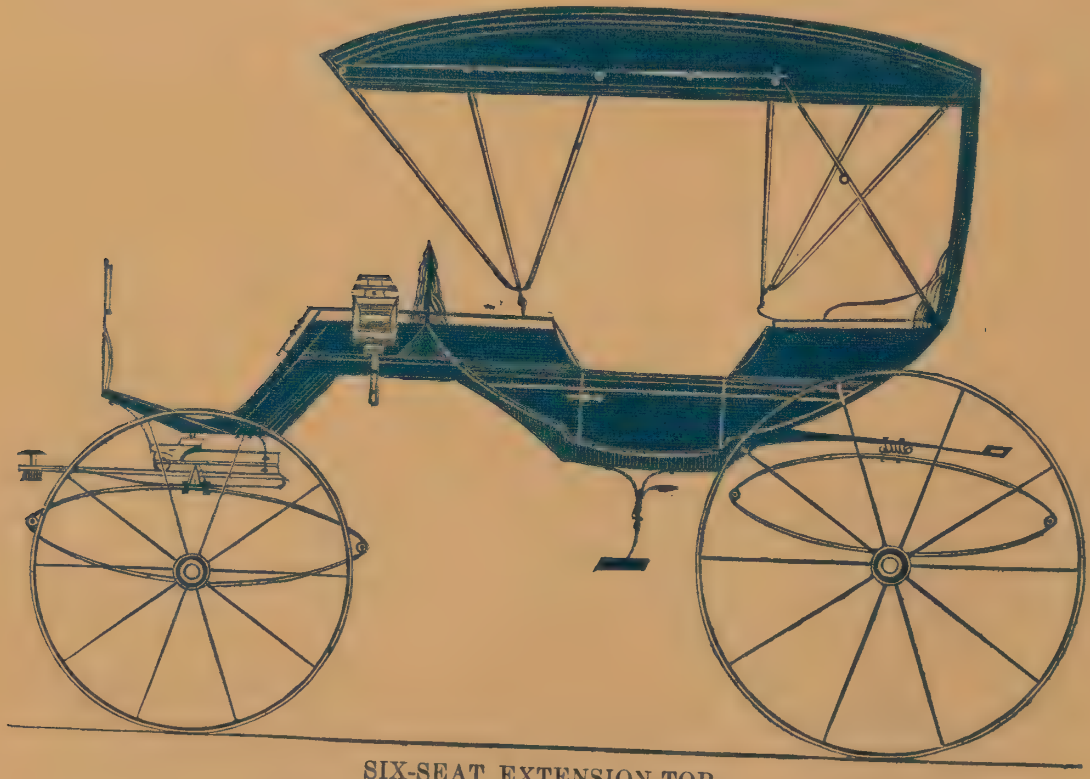
"Ah," said he, "that's a very sensible idea, Mr. Pumice; I am very glad to know you have decided to remain here, but as you *see* the work is in a great hurry, and it will take you ten or twelve days, I suppose, to move here." "Yes, sir," said I, "about that time." "Well," he said, "I would greatly prefer that you would defer your trip until these few jobs are finished, and then, sir, I will assist you all in my power; in fact, you *must* agree to wait, as *money* is rather scarce—(I never saw him otherwise)—in fact I am rather cramped just now. "Well," said I, "I will wait three weeks longer." "All right," he said, "by that time I'll make it all right. In the mean time I will get the papers in regard to that building lot ready for you to sign, so that you will have something to bind you to your future home." "Go ahead," said I, "but remember I must have *all* you *will* owe me at the end of three weeks." "I will attend to it, Mr. Pumice," said he, in his usual pompous manner—which I noticed he assumed after his point was gained.

Now, I rather doubted that he would pay me the cash, but I could not help myself; I had to agree to his terms, no matter what THEY might be. But, to make myself as square as possible with him, I made a point of being quite intimate with all his storekeepers, and also made the extra point of having Lottsell, on some occasion or other, meet with me in some one of the stores, and, as I had got on the "blind side" of him, he told the merchants to let me have what articles I may need at any time I might want them without the necessity for an order, as he is about to



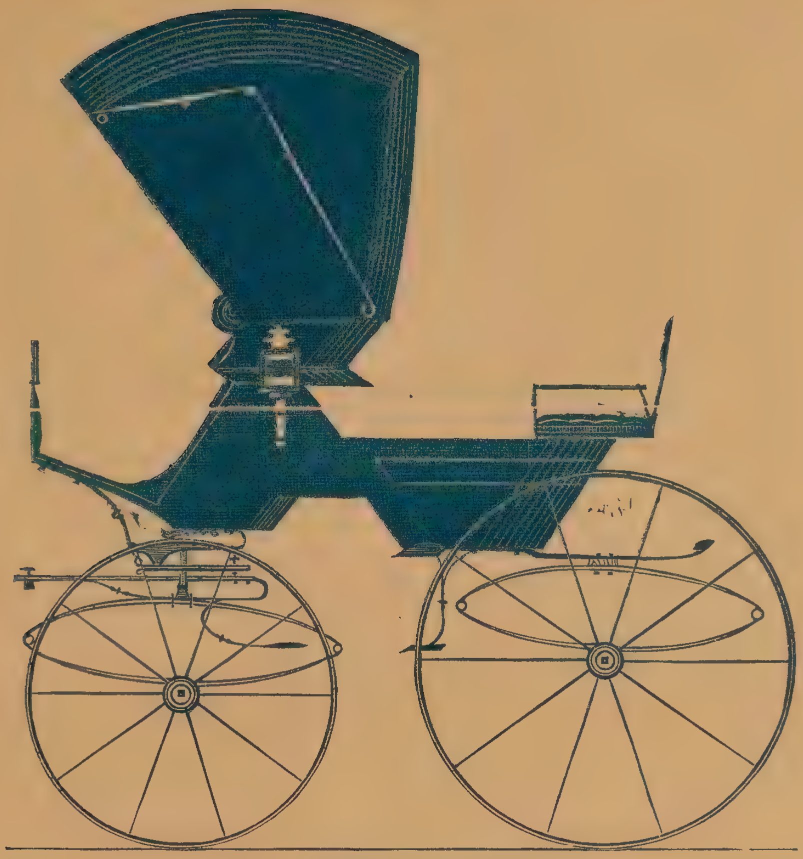
C SPRING CENTRAL-PARK PHÆTON.

Plate No. 1.—Half-inch Scale.—Explanation on Page 4.



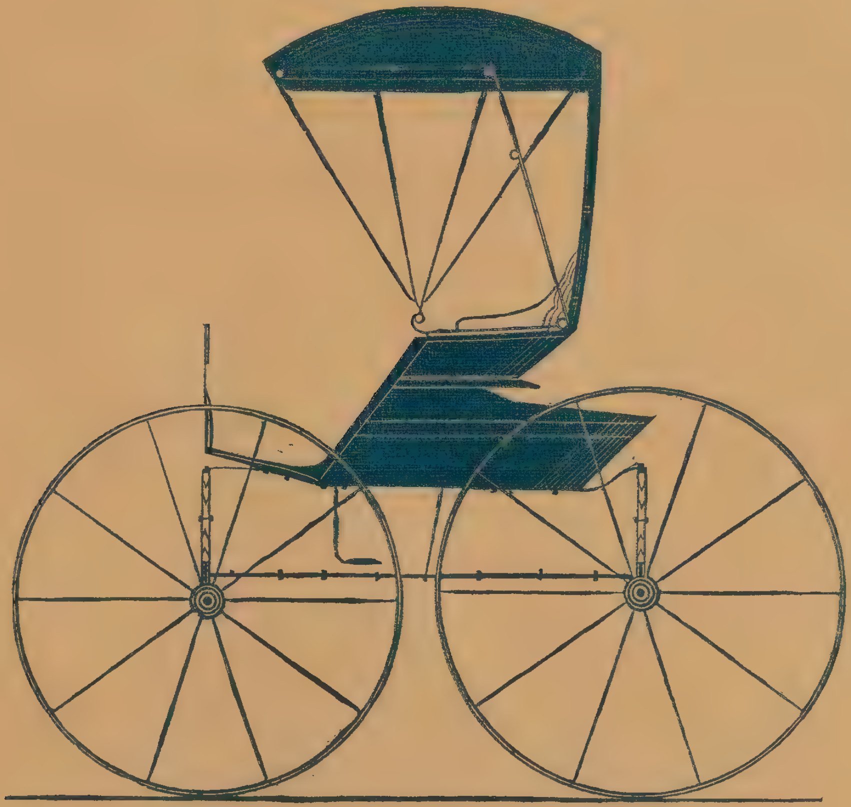
SIX-SEAT EXTENSION-TOP.

Plate No. 2.—Half-inch Scale.—Explanation on Page 4



GENTLEMAN'S PHÆTON.

Plate No. 3.—Half-inch Scale.—Explanation on Page 4.



MARQUETTE BUGGY.

Plate No. 4.—Half-inch Scale.—Explanation on Page 4.

settle down in our town, my dear sir, and become one of us, and a valuable acquisition, too, sir, for our enterprising town. Well, I continued working for him and taking orders, or getting what I wanted without orders, until the three weeks were coming to a close, when I again notified Mr. Boss that I would like to have him be ready with the money. He said all was ready, but he would like to have me defer my trip for another week. I consented; but, before Saturday night of that week I had my eyes a little MORE opened to the order-and-keep-you-where-you-are-system of doing business, for my specimen employer came to me and asked if I could not just as well write for my folks to come on, and thus save time and expense. Very plausible, Mr. Boss, but I told him—no, sir; and he saw it was no use to argue the point. "Well," said he, "*money* is so scarce that I cannot spare enough for your purpose. I might give you enough to take you there, and then you can get enough to bring you back again; or, you could send on what I could spare, and then I would be ready to let you have some more by the time they arrive here."

I made him no answer, but I made up my mind at once. I saw his game plain enough; he was afraid if I left I would not come back, and as he had me he would keep me. I was satisfied he did not intend to give me money enough to leave with, and my opinion was confirmed that evening by one of the painters, who said to me privately, of course—"Fred, do you think the boss will pay you up?—for if you do you'll get fooled. I've been here nigh onto four years, and I know him pretty well, and if he pays you it will be the first time he ever was so foolish as to pay any man all he owed him. This was on Friday; so, next day (Saturday) I asked him to settle my account and see how we stood, "for," said I, "I will not go on, and I want you to get me some money to-day so I can send for my folks, for I believe that, perhaps, might be the best plan." "That's sensible, Fred," said he, "I will do what I can, and will give you the cash time enough to mail this evening." "Thank you!" said I—"How did you say we stood." "Yes, let me see; here is your account, which, I believe, is correct, sir."

As a specimen of how things were done, I here append the bill with items. And note how much I received in money for eight weeks, and then say was I not justified in adopting the principle of retaliation, and thus teach him a lesson that might benefit some other unfortunate after I had left—and show him that perhaps he had better spare some cash for his legitimate business—to pay the hands who earned his living for him and gave the means to speculate? I thought then as I think now, that such people should not be allowed to speculate with other's money, and especially the money earned by the hard labor and brains of his ill-used mechanics. Here's the account as I copy it from my diary, dated Aug. the 5th, 1850.

Fred Pumice in account with H. B. Lottsell.

DR.	
To order on Easten—a jug and 1 gall of rye whiskey.	$2 00
Do. do. 1 gall. of corn whiskey,	1 00
Do. do. 1 pair of boots,	8 00
Do do. 2 pairs of stockings,	1 00
Do. do. 1 quire of paper and 25 envelopes,	1 00
Do. on Brown & Co., 2 white shirts,	6 00
By cash, July 3d,	5 00
Do. July 20th,	50
Do. Aug. 1st,	1 00
Total	$25 50
CR	
To 45 days work, at $2.25 per day,	$101 25
	$75 75
"Deduct from this, Mr. Pumice, said he, "your board bill, which I have just received:—8 weeks board, per order on Eatwell, at $3.25 per week,"	$26 00
	$59 75
To my credit.	

"Now, sir," said he, "I hope that is correct." "Yes," said I, "I did get all those articles, but the prices charged are exorbitant." "What do you mean, sir; I tell you those prices are as low as you can get them in the city. We flatter ourselves that Humphport sells as low as any place this side of Cincinnati; and, now here, sir," said he, "is TEN dollars; that will bring your folks here, and, as I said before, I will then be ready for you. I looked at him and uttered a mental d—— you, you swindling scoundrel. "Can you not let me have more than this?" asked I, "No, sir," said he, promptly, "it is very hard to get money; I had to pay a large tax bill for my property only yesterday, and I am closer pushed than usual." Said I, "I will not take this much—it is no use to me—and blow me," said I, "if I work a lick till you give me twenty dollars at least." "Impossible," said he; "but I tell you, if you will allow a man down the street here 10 per cent. for it, I might borrow it." "Go on," said I, "I give it to him." He came back in ten minutes with the cash, and handed it to me; that left $39.75 due me.

Now I had twenty dollars in cash, and I was bound for "fresh fields and pastures new." He was going home in an hour, and it being Saturday evening, he would not be seen in town again until Sunday, when he came in to church—the *hypocrite*. Here, then, was my opportunity. So, after supper I went for the stores where he had given me authority to get what I wanted without "*orders*." I was going to get even, so from one I bought *a fair suit of clothes;* from another, two pairs of boots; from another, a hat, under clothing and a fine pocket knife; and from another, a beautiful dress piece, as a present to Mrs. Eatwell's Becky. So that, when I got all I thought I needed, my bill, in all, amounted to just seventeen dollars more than the "settler up" said he owed me. Now, this was just about making me square with him, for the prices they charged were awful for the then cheap times. Boots, for instance, eight dollars a pair, I could get then for cash, at four dollars, and so on with other articles. He used to receive 20 per cent. back on all orders, so I quieted my conscience with the assurance that him and me were even now, and I would keep so, and get as far from Lottsell orders and Humphport as the steamer, which called at eleven o'clock that night, could take me.

Now, I did not care to tell every one I was going, because I usually went from a place whenever the spirit moved me. I forgot to say that on principle for convenience, I never carried a trunk, and I had now too much clothes; my baggage train was too extensive, and they bothered me, but I was bound to go: so I put on my two best suits of clothes, one on top of the other; three shirts, one on top of the other, and a double allowance of under wear; all the small articles, stockings, I had six pairs shoved into my pockets. I had my hat full of pocket and neck handkerchiefs, and the rest I crammed into my "carpet bag," with the "exception of the new hat." I soon disposed of the boots by tying them together, and then to one end of a stick, cut for the purpose, while at the other end, to balance the boots, I strung a pair of shoes and a small bundle; the new silk hat on my head, straw one on top of that, a jug containing "groceries," completed my outfit; and then, at half-past ten o'clock, I bid good bye to Becky and a couple of the boys, and with my stock across my shoulder, with boots, shoes, &c., hanging from either end, my carpet bag in one hand, and jug in the other, all my clothes on my back, two hats on my head, pockets stuffed with plunder, twenty dollars in my pocket, I looked, dear reader, if you had seen me, you, like the two ducks who came down to the boat with me, would have burst with laughter; I looked exactly like Barnum's Fat Boy skedadeling from the museum by moonlight. We took a drink; I jumped aboard the St. Clair, and in half of an hour the lights in Humphport were growing dim, I was growing sleepy, and before long I had got lots — of miles from misery and Humphport.

Hoping that my experience may be of some benefit to our younger craftsmen who may have "tramping on the brain," and promising at another time to give another sketch of "My Hunting for a Home," I am yours settled down, but not at Humphport,

For the Coach-Makers' International Journal.

CASTLE GARDEN IN TRIMMING SHOP.

NO. 3.—THE REMEDY.

I have already shown the readers of the JOURNAL a very fair sample of how things are managed under the "Castle Garden" or sweat system. I have attempted to show you some of the iniquities of this foul system of semi-slavery, and that although it does injure the workingman to a fearful extent AT PRESENT, yet it, (the sweat system,) does recoil on the heads of those who are its supporters with a ten-fold vengeance even in the present day, and it will, as it grows older, (if allowed to grow,) injure its perpetuators infinitely more than it can injure the workingman; and in this wise, if it is allowed to continue, and the system be perpetuated, such a thing as a good, finished mechanic, in the Trimming Department of the business will be as much of a "*Rara Avis*" as a no-wife-adult-mormon is in Salt Lake City, or a ten-hour bricklayer will be in New York City twelve months hence—because the few good ones of now will have passed away, and the business will have been reduced to such a *no-trade cant-make-a living at-it* point that no man of sense will allow his boys to learn it. Not LEARN it, for there will be nothing to LEARN, but will not allow his boys to pick it up, (or go to work at it.) I should say, in point of fact, none but "Castle Garden" innocents can be found at a trimming bench, and they only until they can get a job at the more mechanical better paid labor of carrying a little bit of mortar, or a few bricks, in a hod, up a fifty foot ladder, (mere amusement,) for the men on top to do all the work; or until they can scrape money enough together to buy a hoe, and then they will go to scraping the streets, which will be a more respectable and better paying profession than wasting their time at *coach trimming*. Save the mark!

Really, then, there will be nothing to learn, therefore no one will learn it; there cannot be any such thing as competition or friendly rivalry among the workmen as to who does the best job, for none will have a job to do. Really, no one will think of working at it, unless some unfortunate out of work and hard up, and who cannot get anything else to do. Really it encourages cheap sloppy work, it discourages any and every attempt on the part of individuals to improve the business or bring forward progressive ideas; really it frowns down innovations of all kinds, and will not listen to anything in the shape of change. We know how to do this as it is done *will be the word*, and we don't want any new-fangled ideas to steal away our time; we are doing very well now and making money, and if we attempt to alter things we may lose by it, so we will keep on. Exactly on the idea or principle of the man who, when he went to mill used to put a big rock in one end of the bag, and all the corn into the other end to balance it equally; when one day a stranger said to him: "what's the use of that big stone, why don't you leave it out and balance the bag on the horse by leaving it out and dividing the corn half in each end, thus making the load lighter. That stranger was answered: "Well, I dunno bout that; daddy allers done it this way, and I reckon he got along purty well without changing, and I guess I'll keep the rock in the bag."

Thus is it to-day with the "sweater;" thus will it be with the "sweater" hereafter; when an improvement is offered he will keep the "big stone in the bag," and go on the beaten track into which he has drilled his unfortunates to travel, like turkeys going to water, and as I said in my former letter on the subject, I do not blame the "sweaters," as long as they have a good soft thing of it they will nurse it, and keep it soft as possible, as long as they are allowed to keep on getting rich on the sweat of the swindled journeymen and employers it is but *natural human nature* that they should continue as long as possible to make money, even if it is the most contemptible way a man can make money. As long as the boss, who sweats out his work, allows the "wool to be pulled over his eyes," and his work gradually, but surely, taking the "back track" from the eminent position it may once have held, and allow it to continue to sink lower and lower in the scale of excellence, just because it relieves him of a little trouble, I cannot really hold the "sweater" responsible for all the blame, and when the grand awakening does come and the scales are lifted from the bosses' eyes, and he finds his work as I have described, even far behind all or any of the smaller establishments in style and appearance, for it is the big shops where most of this is found, he must not blame the "sweater," he himself, alone, is to blame.

The "sweater," as I have shown, cannot very well be called to account, and the journeymen had no hand in it, they were willing and anxious to do better but they were not allowed to improve. "Oh, make him like another one" was the answer they received when they suggested a change, and they have continued to make him so much "like another one" that to-day the work done in one of our leading establishments is behind that done in some of the smaller shops. Certainly some parts of the work, that part done by the very *small sample* of mechanics represented in the place, is well done, but the botching and guess work of green-horns, tailors, shoemakers, harness-makers, mattress-makers, bootfitters, bird-cage-makers, and boys, spoil the rest of the work, and it is leaving the shop, some of it, looking like the shoes made in some of the other penitentiaries; and although the reputation of a factory may have been never so good, ever so well established, although the public may have the greatest faith in the articles finished in a particular house, still the public have eyes, still the public taste must be tickled, still the public must have change, still the public palate must be gratified, still the public can tell when one establishment falls to the rear, still the public can and will see when the articles they are about to purchase are inferior to what they can get in other places; still the public will demand a change, and if they do not get it they will change; they are nearly tired of seeing work done in the same old way year in and year out; and even if it was good, which it is not from the sweat shops, they will even weary of "*pardrix toujours.*" As I have already exceeded the limit allowed me for this number, I must reluctantly defer the completion of my article to No. 2, of Vol. IV., when I will endeavor to close the subject. In the meantime, I am, brother trimmers, yours, as ever,

B. ILINOVER.

For the Coach-Makers' International Journal.

PAINTING FLOWERS IN MINIATURE.

BY J. H. T.

In a former article I gave some advice to new beginners in ornamental painting, advising them to paint flowers, thereby learning to mix colors, studying the different tints and shades, before undertaking other subjects. In this article I shall give the colors to be used in painting some flowers.

ANEMONIES.—Of this flower there are many sorts, double as well as single, which last are commonly plain, and are either purple, with purple and white, shaded with the same color—some bluer, some redder, sometimes very pale, and sometimes very deep.

Others are colored with lake and white, and finished with the same, by diminishing the white, or even using none at all.

Others, again, are colored with vermilion, and shaded with same color, and deepened with carmine.

Others are white and lemon color. These last are done with masticot, and both must be shaded and finished—sometimes with vermilion and sometimes with a very deep lake, especially at the bottom of the cup, about the seed, which is also often of a blackish color, which is imitated with black and blue, mingling and working continually with fine strokes, scumbling the shades into the lights.

The seed of all these anemonies is imitated with blue and black, with a very little white.

DOUBLE ANEMONIES are of various colors, but the finest of them have their leaves striped. Some of these leaves are striped with vermilion, to which is added carmine to finish them, shading the rest of the leaves blue.

For the smaller leaves within, lay on a mixture of vermilion and white, and shaded with vermilion mixed with carmine here and there very strong, particularly in the heart or cabbage, near the great leaves, on the shady side, and finish with hair strokes of carmine, which must humor the stripes and turn the leaves.

The stripes of others are colored with carmine only, as well as the inner or smaller leaves, but yet observing to leave a little round in the midst of these last, where a deep purple or violet must be laid, which must be scumbled into the rest; and, the whole being finished, lay on broad strokes of the same color around the smaller leaves, especially on the dark side, and scumble into the greater, which must, for the rest, be shaded with blue and black.

In some others the smaller leaves are of lake or purple, although the stripes of the larger are carmine.

There are others whose stripes are carmine in the middle of most of the large leaves, with vermilion under it in some places all which must be scumbled into the shades of the ground, which are of blue, black and white. The smaller leaves are laid in with masticot, shaded with deep carmine on the light side, leaving here the masticot almost to itself, and only dividing the leaves with a fine touching of orpiment and carmine, which smaller leaves may sometimes be shaded with a very little pale green.

In short, there are all colors of these double anemonies, as well as the single, which are to be painted by the rules here suggested.

The green of both kinds should be verdigris, mixed with masticot, for the dead coloring, and finished with chrome green.

The stalks incline to be a little reddish, therefore they are to be shaded with carmine, and sometimes with green, after they are laid in with masticot.

CARNATIONS.—It is the same with carnations and pinks as with anemonies and tulips; for some of them are variegated or mixed with several colors, and some of them are of one single color.

The first are sometimes streaked, striped or marked, sometimes with vermilion and carmine, and sometimes with lake; at other times with pure lake, or with white—some deep, some pale; sometimes they are variegated with small or narrow strokes; these grounds are commonly shaded with blue and white, with a very little black.

In short, there is a great variety of these flowers, which nature or your own fancy will direct you to represent.

The green of all of them is of a sea hue, and shaded with iris green.

COWSLIPS.—It must be observed that they are of four or five colors, namely: of a very pale purple, of gridelin, of white and yellow.

The purple—for painting those of that color—must be made of ultramarine, carmine and white—observing to diminish the quantity of the latter when you are shading.

Those of gridelin color must be made and painted with a light lake, a very little ultramarine, and a great deal of white, and shaded with the same, but darker.

The white sort must be done with white alone, and shaded with black and white strokes.

The eye of these three sorts of cowslips, which is in the form of a star, must be done with masticot, shaded with sienna, and in the midst of it, a small round of green.

The yellow cowslip must be done with masticot, shaded with sienna and a little umber.

The buds, the leaves and the stems, must be verditer, mixed with a little masticot, and finished with iris green; with this same color the ribs and veins on the leaves must be expressed, heightening the lights of the largest with masticot.

CROCUS FLOWER.—Is of two colors, the yellow and the blue or purple.

To paint the yellow crocus, take masticot and Roman ochre, shaded with yellow ochre and umber, expressing three lines or rays on the outside of the leaf, separate from, and parallel to each other, with bistre and pure lake, which must be scumbled into the strokes of the ground or leaf; and the inside of the leaves must be all yellow.

For the purple crocus, lay on carmine, mixed with a little ultramarine and white, expressing deep purple stripes on some of the leaves, as you did for the yellow, and on others only fine veins.

The seed of both sort is yellow. For the stalk, lay on white; shade with black, mixed with a little green.

The green of this flower is a pale verditer, shaded with green.

GILLIFLOWER.—There are many sorts of gilliflower, as white, yellow, purple, striped, streaked or variegated with several colors.

For white ones, cover with white, and shade with black and blue, for the heart of the leaves.

For yellow, use masticot, yellow ochre, and Roman ochre.

For the purple sort, use purple and white, and finish with less white, making them brighter in the heart, and also somewhat yellowish.

For the red sort, use lake and white, and finish without white.

For the striped and variegated sort, lay on white and variegate sometimes with purple, in which ultramarine predominates, or sometimes with a purple, in which carmine prevails, or lake; sometimes with white, and at other times without it, shading the leaves with blue and black.

The seed of them all are done with verditer and yellow, finished with iris.

The leaves and stalks are to be done with the same green, mixed with iris to shade with.

HELLEBORE.—This flower is to be done by laying on white, and shading with blue, black and a very little white, making the outside of the leaves a little reddish here and there. The seed must be a deep green, heightened with yellow.

The green must be sad—must be done with green, yellow and lampblack, and finished with green and Roman ochre.

Hyacinth.—This flower is of four sorts. 1. A deep blue. 2. A paler blue. 3. A gridelin. 4. A white.

For the first, use ultramarine and white, shaded and finished with less white.

For the second, make that of a paler hue.

For the third, use lake and white, and then shaded with black and a little ultramarine blue, and finish it with the same colors, but of a deeper degree.

The fourth must be all white, and then shaded with black and a little white; finish with strokes of same color, with the outline of the leaf.

The green and stalk of the blue kind must be of the sea sort, shaded with a deep iris, and in the stalk of the first you use a little carmine, to give it a reddish cast.

The stalks of the two other kinds, and their greens, must be colored emerald green and yellow ochre, shaded with dark green.

Jessamine.—Commence this flower with a lay of white, shaded with black and white. For the outside of the leaves add a little yellow with Roman ochre, giving the half of each on that side of the leaf a faint cast of carmine.

Imperial Lily.—This flower is of two colors, viz: yellow and red and orange color.

Color the first with orpiment, and shade with Roman ochre and vermilion.

Cover the second with orpiment and vermilion, and shade with vermilion and very little burnt umber, doing the beginning of the leaves, next to the stalk, with lake and lampblack, very deep, and all veins, of this mixture, along the leaf. Do the green with verditer and masticot, shaded with iris and sienna.

Jonquil.—Commence this flower by laying on masticot and Cologne earth, and finish with sienna and Cologne earth. For the leaves and stalk use sea green, shaded with iris green

(to be continued.)

For the Coach-Makers' International Journal.

Princeton, Wis., August 25, 1868.

Mr. Editor:—Having seen in your Journal and *Scientific American*, within the past year, articles written by your correspondents, doubting the accuracy of experiments on the draught of wagons, made by Mr. Henry Harper, formerly of Berlin, Wis., at my factory in this place, on the ground of their being contrary to supposed laws of mechanical power, I will say:

1st. That in the fall of 1865, Mr. Harper constructed a place for trying the draught of wagons and carriages on an inclined plane at my factory, that would give an accurate test of the power required, which was plain to perceive by any one.

2d. On the trial of draught, it was found that we had made great improvement on the draught of wagons over those that had not adopted his principle for measuring the proper pitch for the axle arm; also, we found that the draught necessary to draw 100 lbs. up an inclined plane, that rose 4¼ inches to 4 feet length of the incline, required only 8 lbs. 14 oz. I made the draught 2 oz. less than Mr. Harper declared it, and have warranted my wagons to be equal to that power since.

3d. I will be thankful for any amount of orders for wheeled vehicles that shall equal that in ease of draught, and that shall not wear so as to injure the axle arm, as long as the proper set is preserved, and the axle is kept properly lubricated. I will warrant all my wagons equal to the above statement. August Thiel.

Pencil, Rule & Square.

D. BOARD, EDITOR.

BODY DRAFTING—PART FIRST.

BY A PRACTICAL CARRIAGE ARCHITECT.

In the last number of Vol. III., we promised to spare no efforts to make this department acceptable to our numerous readers the coming year, and we enter upon its duties with a light heart, feeling that our labors in the past have been appreciated, and a field of greater usefulness opens to our view.

The Journal, being now the largest. and having the most extensive circulation of any publication devoted to the art of coach-making in this country, we feel like redoubling our efforts to make it abound with interesting and useful matter, our only object being to assist in making it a publication worthy the attention of coach makers, and an honor to the age and country in which we live.

The publication of the French Rule, in the volume just closed, awakened such an interest among the craft that the publisher was unable to meet the demands made upon him for copies containing it, the supply of back numbers having been exhausted long before the close of the volume, and as it is his intention to republish it, in obedience to the many calls he is daily receiving, we shall rewrite it, and endeavor to make some points, to which our attention has been directed, more plain, and in order to do so in a way that the new beginner may not be "confused by letters and figures," we have decided to redraw the first *two* illustrations, and increase them to three-quarter inch scale, the same as the rest were drawn. While we shall republish the "French Rule," we will say there shall be no lack of interest in giving other practical information appertaining to this department, such as cants applied to drawings, manner of construction, &c.

In recommencing, we shall give it in the same system as required in the workshop. First, we shall establish the ground plan; second, the patterns; third, the square rule, and fourth, the manner of construction.

This illustration, (see front of Journal,) represents the drafting of a coach, the laying out of the carriage part, the height of the wheels, and turning under of the same. You may now proceed to draw the ground line C. Measure 34 inches from ground line C, that being the height we wish to hang this coach. Draw the base line A, measure 3 inches from line A and draw line K, being the depth of rocker. From line K measure 12 inches, being the height of your seat, dotted lines. From this point measure 45 inches; draw the line E, being the height of body. Lay off for the width of the doors, which is 22½ inches, draw lines B and H. Measure from line B 26½ inches, and draw line F, being the depth of back quarter. From line H draw line N, measure 24 inches, this being the width of front quarter. Now you can sweep the body, and lay off for the guide rail of the doors. Measure 26 inches from the hinge pillar, this point being the centre of the hind wheel, which is 4 feet 2 inches. You will strike the wheel this size. Next proceed to lay out for the spring, which is 2 inches, 5 plates 42 inches long, 12½ inches opening; this spring is clipped underneath the axle, which is 1½ inches; measure from underneath the axle 12½ inches, being the opening of the spring. Measure 1¼ inches for the five plates, being the depth of the top part of the spring, 1¼ inches for the depth of the back bar, ½ inch for the brake or pump-handle plate. This point is the bottom of the brake; sweep the brake as represented in the diagram.

Now proceed to lay off for the front carriage, to ascertain the height of boot; the width of track being 5 feet, spring 2 inches, 5 plates 40 inches long, opening 14 inches, allowing 1½ inches for the settling from the weight of the body. For the establishment of the point where we want the wheel to stand, when turned square under the body, when the body is swept, extend the bottom sweep of the rocker to line N; at the same time you can dot off the manner of paneling the bottom. This square corner is the establishment of line, figure 2, or the point we want the wheel to stand when turned square under the body. The object of this corner is to shorten the coupling as much as possible, which is an important point. Measure from this dotted corner in panel, on line No. 2, 7 inches and draw parallel line D, this being the space required over the top of wheel for settling of the coach when loaded. Measure from line D, on line No. 2, to ground line C, 42 inches; this the height of the front wheel. Measure from line, figure 2, 27 inches; draw a perpendicular line 27 inches, this being the centre of the wheel. Measure 5½ inches from this line, the centre of the wheel, and draw line, figure 6, this being the centre of the king or body bolt You can now strike the front wheel. Your front springs are clipped on top of the axle, which is 1½ inches; measure 1¼ inches, the depth of the bottom part of the spring, 12½ inches opening, 1¼ inches for the top part of the spring, ¼ inch block top of spring, ½ in. plate for the bottom of lower bed. This bed is 3 inches deep, sweep up 1⅛ inches, leaving 1⅞ inches deep in centre. Fifth wheels ½ inch each. Top bed 1¾ inches deep; ⅜ inch plate for the bed. Lay off 3 inches for the depth of the body block, this point is the bottom of your boot; proceed to sweep your boot as represented in diagram. It is necessary in hanging a coach to hang it 3 inches higher in front than back, calculating from a level line from the bottom of pump handle to bottom of boot. We will now proceed to lay out and prove our calculation for turning of the wheel. We have given the top part as it passes under the body square on line figure 2. Next proceed to draw a parallel line, figure 10, being the centre of front wheel, and also centre of boot. Measure 17 inches from line, figure 10, draw line, figure 5, being half the width of boot; next draw perpendicular lines, figures 9 and 11, the size of the front wheel. Measure 32¼ inches from centre of front wheel, and draw line 7, representing the top of the wheel. Measure 2¼ inches from line 7 and draw line 8, being the width of the wheels at the bottom. Take your dividers, place one point on line 6, where it intersects with No. 10, this point being the centre of king or body bolt, the other at the back part of the wheel, at point figure 11, you can strike the turning of the wheel to parallel line 10, and square from this point to the body as represented by figure 1; this is the extreme back of the wheel as it turns under the body. You can proceed in like manner with figure 2, starting at the top of the wheel. This is where the top of the wheel will stand when the carriage is turned square under the body, and also proves the establishment of this line. Figure 3 represents the tread of the wheel upon the ground. You will notice in the diagram where the circle intersects line figure 5. This line being the outer edge of the boot at this intersecting point, you can square a perpendicular line to boot, which is figure 4. At this point is where the top of the wheel passes the outer edge of the boot, when turning under.

This manner of laying out work gives the builder an opportunity to provide the material for the wheels, to order the springs and axles, in fact everything pertaining to it, while the body is being built, so as there will be no delay in ironing or finishing, which often is the case, and causes a loss to the builder.

Wellington, Ohio, Sept 12, 1868.

Mr. Editor;—I would like to ask the best and easiest way of building the Albany swelled side cutter. Please insert the answer in the October number of your Journal As my subscription is only paid for half of next volume, I will enclose $1.50. I have six copies of it now, and would not do without it for double the rate. I used to take the New York *Coach-Makers' Magazine*, but think yours far ahead of it, and stopped that for yours.

Yours, truly, A. G. Z.

The manner of constructing the Albany swelled side cutter, plate 37, Vol. III., is as follows: The bottom sides are bent, the shape as shown by side elevation, the front connecting with the runners. The top rail is also bent; this has a side swell of six inches, and is lapped on to the runner on the front part, and framed to the bottom sides at the back. The lower panel is put into a groove; mouldings one-half inch deep, with chamfered edges; strainers on the inside. The upper quarter is frame work on the inside. Panel grooved in the back part of bottom side and top rail; back panel also placed in a groove. Give a good arch to the back. There should be iron stays inserted on the inside at intervals, secured with a T plate on the bottom side and top rail, and ironed at all other weak points of the body. What really is necessary to bring out this beautiful design of sleigh is a good eye and the exercise of a good judgment.

Decatur, Ill., Sept. 14, 1868.

Mr. Editor:—I enclose a stamp, and make a few inquiries which you will oblige me by answering by return of mail (by letter.) I am a subscriber to the Journal, and recommend it wherever I go. I am only six months out of my apprenticeship, learning my trade in the country; and a good time I had of it, sure. I do not want you to display my ignorance in print, but I wish to fully understand the instructions in the Journal.

1st. I wish to have an explanation of what is meant by the *cant* of a body?

2d. Are wheels with twelve or fourteen spokes better or as good as wheels with fourteen and sixteen spokes, or are they made so because they look lighter than wheels with more spokes? My experience has not been long enough to know this by observation. O. J. A.

1st. The cant is the working draft of the body. All lines, except the side elevation, are called the cant, and are taken from half the width of the body. As an explanation of the cant will be more in place in giving the system of drafting, we shall, at the proper time, as we proceed with the French rule, give a more clear and full explanation of what is meant by a cant.

2d. Wheels should be made wiih a sufficient number of spokes to properly divide the spaces on the rim, and afford sufficient support to prevent sinking in between the spokes, and, at the same time, avoid too many to weaken the hub. The less number of spokes the stronger the hub, and weaker the felloe. Judgment should be used in dividing the difference, so as to make each part of the wheel strong in proportion. For wheels from 3 feet 10 inches to 4 feet 2 inches fourteen spokes will be a proper number, but as the size of the wheel increases or decreases add or diminish the number of spokes, being careful to reduce your tenon proportionately, in order to not weaken the hub.

The New York *Times* says that the employers insist on paying the striking bricklayers $5 a day, and they insist on not having but $4.50: it is the eight-hour system that they want with the $4.50, and it is the ten-hour system that the "bosses" want with the $5 a day. The difference between the two is still 62½ cents, though the principle is what the strikers are contending for.

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

NEW FORE CARRIAGE.

FRENCH DESIGN AMERICANIZED.

The annexed drawing illustrates a light fore carriage with drop pole and shafts, suitable for light phætons, coupæs, Victorais, and other light carriages. We think this design will be accepted by our patrons, and without doubt be useful to the builder. Was taken from an original French drawing, which is very clumsy in appearance, and remodelled, or, in other words, Americanized, to suit the wants of our builders.

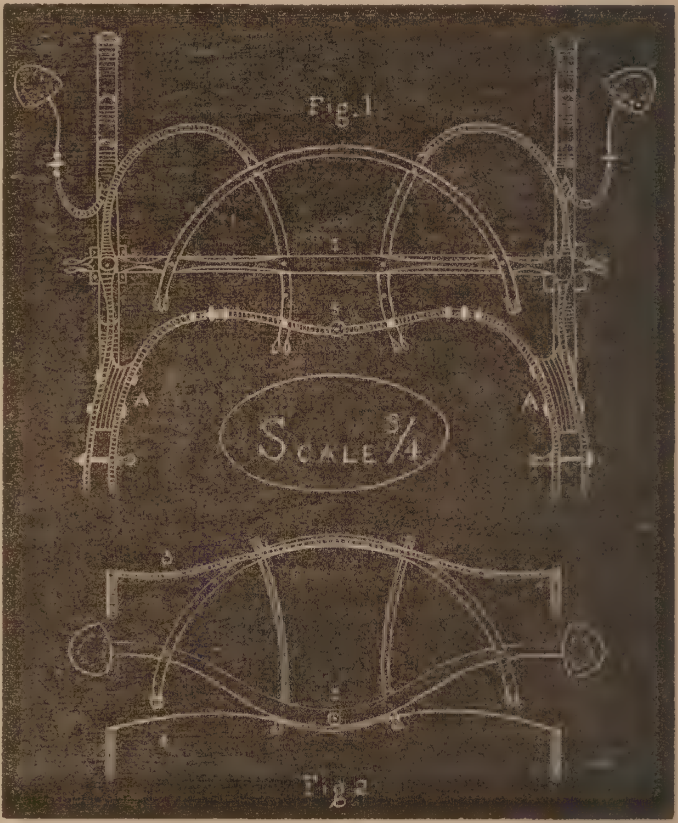


Fig. 1 represents the lower part or under section. The new mode of constructing this carriage is the doing away with the bent furchells, and using puncheons in their places; the inside front stay is worked in one piece, in the centre is formed the socket to receive the king or body bolt. This stay rests on top of the two puncheons. There is a T plate formed solid with these stays running back to the bed, and at A forms the inner part of the socket for receiving the shafts. The back stay passes around under the puncheons, crossing the bed to the front, and bolted where the front stay crosses the puncheons; the other end extending to the front, forming the outside of the socket for receiving the shafts. A A represents a piece of hickory bolted, between the two stays.

Springs 1½ inches, four plates, 37 inches long, 11½ opening, or vary to suit the body the carriage is intended for. Lower bed 1¼ by 1⅛; ⅜ plate on the bottom. Wheel or stay iron ½ inch round, increasing in size to the puncheons. The box clips over the bottom bed, with clip bars, are worked solid. The clips are put from underneath the springs, and nutted on top. The size of half fifth wheel 1 inch by ½ inch flat, with brass scrolls riveted on.

Fig. 2 represents the top part of carriage; No. 2, the bent bed by 1⅛ by 1¼ in centre; ¼ plate on top. Step at each end, as shown in diagram, or finish with scroll. No. 3, iron back stay, or back bar. By making this of iron it gives the carriage a lighter appearance. This iron is turned L shaped, and bolted to the body. No. 4, the horn stay. The top half of fifth wheel half round iron, with brass scrolls lapped and riveted as shown. Care should be taken and judgment used in proportioning both wood and iron for the body intended for.

MANSFIELD, Pa.

MR. EDITOR:—We take your JOURNAL at the shop, and living, as we do, in the country, generally if a tool breaks, the blacksmith has to mend or make another. There is one particular job which is and has ever been a source of much annoyance to smiths generally, that of tempering thin steel tools, such as blades for spoke-shaves, planes, &c. Is there any solution or certain way to prevent warping? If so, what is it? Please answer through the JOURNAL. It will be a benefit to all likewise ignorant, and will greatly oblige,

Yours, &c., F. A. K.

To prevent thin steel tools from warping requires no small amount of skill and practice on the part of the smiths who may attempt to give them the proper temper. The tempering of such blades as you mention in a satisfactory manner being so delicate an operation, even with the edge tool maker, it is not surprising that so many carriage-smiths, with but limited experience in the art, are unable to give the required temper, so as to prevent warping. Our manner of tempering such tools is to coat the blade with chalk. After heating, cool it in linseed oil. Next, take a block of hot iron, and by applying the tool to the iron draw out the temper of the blade, until it attains a heat known as "bird's-eye blue." Cool it off again in the oil, and the process is completed. There is a solution for tempering thin steel tools, but not having had occasion to use it, we cannot speak from our own experience as to its merits.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

The Principles of Coloring in Painting.

Under the above heading we design giving some useful hints, which will, we trust, be of value to many who are following the trade of coach painting, and who are so devoted to their calling as to give a liberal share of their leisure time to its study. The selections will be made with a view to the practical application of the rules laid down. While the ornamenter, scroller and picture painter may be more particularly benefited, the striper and surface painter can glean many useful hints as to the most suitable colors to place near each other, or together, as in striping.

"Colors are distinguished by artists as *pure*, *broken*, *reduced*, *gray*, or *dull*, &c."

"The *pure* colors comprehend those which are called *simple*, or primary—red, yellow and blue; and those which are formed from their mixture in pairs, (binary compounds,) which are termed *secondaries*, viz: orange, violet, green, and their hues."

The broken colors are formed by the mixture of black with the pure colors, from the highest to the deepest tone.

"A *normal* color is that color in its integrity, unmixed with white, black, or any other color."

Tints, *shades* and *hues* of color are terms used in speaking of colors. Charles Martel, from whom we quote, says:

"These modifications may be comprised under two kinds, one in which a given color is modified by the addition of a small quantity of another color, (*hues;*) the other where a normal color is modified by the addition of white or black, (*tints* and *shades*.")

"Red, yellow and blue are termed *primaries*, because they are the source from whence all other colors are derived by mixture."

The mixture of primaries in *pairs* are termed *secondaries*.

SECONDARIES.

By mixing two parts of red and two of yellow produces orange. By mixing two parts of yellow and two of blue produces green. By mixing two parts of red and two of blue produces violet.

SECONDARY HUES.

By mixing three parts red and one of blue produces violet-red. By mixing three parts red and one of yellow produces red-orange. By mixing one part red and three of yellow produces orange-yellow. By mixing three parts yellow and one of blue produces yellow-green. By mixing one part yellow and three of blue produces green-blue. By mixing one part red and three of blue produces blue-violet.

By adding to red, 1st, blue, we produce violet and its hues; 2d, yellow, we produce green and its hues; 3d, white, various light tones of red; 4th, black, various dark tones of red; 5th, gray, various broken tones—red-grays or browns; 6th, green, gray.

By adding to blue, 1st, red, we produce violet and its hues; 2d, yellow, we produce green and its hues; 3d, white, various light tones of blue; 4th, black, various dark tones of blue; 5th, gray, various broken tones—blue-grays; 6th, orange, gray.

"Normal gray is black mixed with white in various proportions, producing numerous tones of pure gray."

Having selected the colors named, and provided yourself with a palette-board, palette-knife, and a piece of canvas, tin or board, and a half dozen pencils, proceed to experiment in the mixture of colors as laid down in the above table. A small quantity only will be needed of each. Having placed the three primaries—red, yellow and blue—on the palette, proceed to mix them according to the table, placing them on the canvas or prepared panel in the order named above. A space of one inch square laid off on the canvas will be sufficient, being careful to keep your colors as pure as possible. To do this it will be necessary to keep the pencils clean. When the pencils are to be changed from one color to another rinse them out well in turpentine, or wash them with soap and water, wiping them dry on a piece of soft rag. It may be found more convenient to use only turpentine while at the work, as it (turpentine) frees the hair more readily of color, and leaves the pencil in condition to continue the work without any delay. When you have become wearied, and wish to lay the work by, cleanse the pencils thoroughly with soap and water, clean off the palette-board, and put everything snugly away for another time. You will find that a short time spent in this manner, as opportunity offers, will repay the trouble and expense, and be of incalculable benefit. The tube colors will be most convenient if you wish to use oil colors. Water colors would answer the purpose; but, as the coach-painter needs no water colors in his work, it is better to practice with oil colors.

How much more profitably might apprentices and young men who are working at their trade as journeymen spend their leisure time, if they applied themselves to the study of their branch. But we are sorry to say that the majority idle away precious hours in saloons, or on the streets, and even worse places. We would not deny them pleasure and amusement, but would like to see them choose those that are harmless.

[TO BE CONTINUED.]

MR. EDITOR:—I would ask, is it good and durable to mix red lead or burnt umber with white lead, and, if so, what proportions to mix, and what proportions of oil, japan and turpentine?

What is the cause of varnish pitting, and how to prevent it? S. H.

ANSWER TO QUESTION FIRST.—We think it a very good plan to mix red lead, or umber, with white lead, but do not claim for them any great superiority, if any, over the old-time mode of using lamp-black. Lamp-black is more of a greasy nature than either of the two colors named, they being good dryers, which lead some to think that they are superior. But lamp-black is good enough, provided it is used with discretion. The coats of lead on a body or gearing need not be made lead-color, as some are in the habit of doing; but, by merely changing the lead to a pearl or silvery-gray, it will dry firmly, and wear equal to work filled with any other mixture. In using the red lead, or umber, use less japan and more oil—one-fourth japan and three-fourths oil, and one part each of red lead and umber to three parts of lead, thinning down with turpentine to suit the work you may be doing.

Answer to Question Second.—In answering the above question, we will be unable to give a certain and never-failing remedy to prevent the occurrence of this most perplexing feature in varnish. We will give you the benefit of our experience, running through several years in different first-class shops, where we have battled with the many trials incident to the paint shop. We can heartily sympathize with the painter when he steps into the varnish room in the morning and finds a job wofully pitted which he had left the night previous in good condition. Happy for him, then, if he has an employer who can sympathize with him, and not lay all the blame on the painter. While it may be a great annoyance, and attended with extra cost in finishing the work spoiled, still it is a kind of trouble that carriage-makers are heir to, and the most manly course is to make the best of it, and by taking notice of the circumstances, the kind of varnish, the state of the weather, temperature of the room, &c., the mishap may prove to be a useful lesson.

As no shop, from the largest and best managed down to the humblest, can prevent the occurrence occasionally of work pitting, we are forced to the conclusion that it is caused, in very many cases, by the atmosphere. But as varnish will pit under such a variety of changes in the atmosphere, and as the atmosphere seems to be capable of such an infinite number of mixtures, being charged with greater or less quantities of electricity, (which determines the chemical qualities of the atmosphere,) we can only give you our experience. In the last eight years we have had not to exceed five pitted jobs.

In the first place we would advise to buy the best quality of rubbing and finishing varnishes. Endeavor to obtain rubbing varnish which is not too new; new varnish is more likely to pit and draw up than that which has had six months or a year's age. Avoid using the rubbing varnish too close down to the bottom of the barrel or can, as the dryers and sediment, being there in excess, will, in all probability, cause the varnish to appear dull, shrivelled and pitted in a few hours after it has been laid on.

2d. The mixture of two different kinds of rubbing varnish will often cause pitting; avoid it as much as possible.

3d. Varnishing over color not thoroughly dry.

4th. Varnishing in a tight room, with the thermometer ranging from seventy-five to ninety degrees, with your floor wet down around your job; the steam rising up from the floor may cause pitting.

5th. Varnishing in the early spring, fall or winter, in a cold room, where the work to be varnished is chilled, or should the room, varnish and body be of the same temperature, letting the room cool off too suddenly at night.

6th. On a hot summer day, when a rain storm is coming up, wait until the storm has burst over the earth; in nine cases out of ten, if you lay on English varnish while the storm is gathering, your work will be badly pitted.

7th. If your varnish room attracts dampness at certain times, and you notice the walls and window panes sweating, postpone your finishing for another day.

8th. Pour out your varnish and let it evaporate for five or ten minutes before using; especially must this be done with the English finishing varnishes, and also with the English black japan.

When a job has pitted, wash the varnish off with benzine or turpentine, if not too dry. By this means you lose but one day; whereas, if you allow it to dry, it will take at least two coats of varnish to make a good job, which will consume a week.

We do not claim that in every case mentioned above that they are reduced down to a certainty, so that there might not be a variation, but these are the main points that have guided us and saved us a great deal of trouble in our attempts to please employers.

We would say then, in conclusion, should a body pit badly, don't grieve too long over it, but take out your memorandum and note down the circumstances connected with it, and watch for the next job that pits, and compare the two or more together, and by this means you may find ways and means to avoid a great deal of "bad luck" in the future.

Mr. Editor.—Would you be so kind as to answer these questions in your next Journal? Which is the best of Mr. Thumb's brushes for finishing bodies, elastic or half elastic? What is the cause of varnish striking in after the work stands awhile? W. C. H.

Answer to Question First.—There is nothing, we think, that painters have differed more widely on than the best kind of a brush with which to apply the finishing coat of varnish. Our "veteran" painters, to whom we are wont to look up to with no small degree of reverence, claim that no brush can be made to equal "the good old round bristle brush." Well, every one to their own notion. We think that improvements have been made in varnish brushes, as well as in many other tools used by mechanics. The black sable and badger hair brushes are far superior to the old-fashioned bristle brushes in many respects, and in some sections of the country are used altogether for the finishing coats. The favorite brush now among painters who have tested them is the half elastic, made by Mr. Thumb of Philadelphia. The elastic brush is much softer, but we prefer the half elastic, because it has a good spring to it, and takes better hold of the varnish when it works toughly, as is sometimes the case. The flat bristle brush, by the same maker, designed for American or rubby varnish, works very pleasantly for finishing coats, and is far superior to any other bristle brush we have ever tried.

Question Second.—The grain and pores of the wood being imperfectly filled by the under coatings, or, more properly speaking, not being filled by a material that perfectly resists dampness and other changes in the atmosphere, allows the coatings of varnish to penetrate into the wood so long as the pores remain open. This may be proven by revarnishing a job that has "struck in," or by the solid appearance an old carriage presents after being painted over two or three times. We have noticed among some of our best manufacturers the same defect mentioned by "W. C. H.;" so that the theory that the body has not been properly filled up, or was too much hurried in the painting, is not proven by the facts in the case, and by notes taken in shops east and west. The fault lies at the foundation of the painting. Whenever an article for priming shall have been invented which will penetrate deeply into the pores of the wood, cling firmly, and be proof against changes in the atmosphere, (the wood being thoroughly seasoned,) then, and not till then, will the difficulty be obviated. We have used an article which claims to be, and we are satisfied is, far superior to lead, in that it is proof against dampness, and prevents, in a great measure, the varnish from striking in, viz.: "Piowtrowski's permanent wood filling."

Newville, Sept. 9th, 1868.

Mr. Editor:—I want to know how to (face) a body, and at what time it is done. In your reply, in the August number, to S. S. P.'s question on polished work, your reply directs to give the body four coats of filling, and then cut down with lump pumice stone, give a coat of dead lead and then (face) it. I wish to know if that is the time the (facing) comes in generally, *and how to do it?* From a Subscriber.

Answer.—To *face* a body you use lump pumice stone and water, going over the surface lightly, so as to level down the putty and lead, and also to force the lead into the pores of the filling. *The facing is done after you have put on a coat of lead*, and puttied up any dents, bruises or other defects noticed on the surface after the filling has been rubbed. The facing is only done to prepare the body for a more perfect surface, and while it is undoubtedly the best way to fill up the pores of the rough stuff, many shops do not practice it; some because it takes a little more time, and others because they have never seen a body so prepared. We would advise the use of English rubbing stone, instead of a file, to keep the pumice stone sharp and free of lead; by rubbing the pumice stone on a level piece of English stone the pumice will take up some of the grit, and work more pleasantly. In speaking of a body in "filling" or "rough stuff," we say *rub out*, *rub down*, or *cut down that body;* after the filling or rough stuff is cut down, *sand-papered*, *leaded*, and puttied where needed, we use the word *face*, because the rubbing is only done on the face of the surface gained by the former rubbing of the body.

MR. EDITOR.—I wish to inquire whether the Piotrowski Permanent Wood Filling, advertised in your JOURNAL, is of any account; and in what shape is it put up. SUBSCRIBER.

We frankly reply to the first question, the Permanent Wood Filling is an improvement in the manner of filling up work, which is destined to revolutionize the whole system of preparing carriages, railroad cars, &c., for the surface work.

The above question coming to us from a section where there was no opportunity to see work that had been primed with the above named filling, we felt it to be our duty to obtain positive evidence of it worth, before advising the use of it. Accordingly, we took a trip to New York, and called at Brewster & Co.'s manufactory. On announcing our business, we were cordially received by Mr. Britton, who at once entered into an explanation of the good qualities of the filling. It was not simply a wordy praise, with no substantial proof to back up his assertions. He showed us a panel taken out of a spring wagon, used by the firm as wagon of all work. For nearly two years it had seen the roughest usage, and been subjected to all kinds of weather, winter and summer. In fact, they abused the wagon in order to test the Permanent Wood Filling. We saw the battered panel, and found that the foundation was as solid as when first coated—the English varnish, although somewhat cracked, retained much of its original gloss. He stated, also, that he bruised one of the panels while the wagon was in use, to give the water a chance to penetrate, and scale the paint. He found that the Permanent Wood Filling was impervious to water. So far so good, we thought. We were not yet fully satisfied. Mr. Britton, are you using it on your *own* ordered work? The answer being—yes, sir, we are. He then proved it to us by taking us through the shop, and we saw for ourself, bodies and carriages, (heavy and light,) all undergoing the same process. Being introduced to the foreman, Mr. Monks, we inquired of him, also, as to the merits of the filling. He praised it very highly, and showed us through the body and gearing room, giving a full explanation as to the mixture of the rough stuff coats for bodies, and the mixture of color for carriages. After this weight of evidence in favor of the new mode, we feel safe in advising carriage-makers to adopt it. If Messrs. Brewster & Co., of New York, have staked their reputation for good painting on its use, we have no fear of recommending it to the trade.

We hope our subscribers will fully appreciate our labors in furnishing information in regard to the "filling." By doing away with the use of so much lead, it will not only be a saving to the manufacturer, but a decided gain to the health of the painter. We feel the poisonous effects of lead in our very bones while we are penning this article, and would gladly hail any new system that would banish it from the workshop The pale-faced painter would then regain a healthy complexion, and instead of crying out innovation, would hail the advent of the "new system."

ANSWER TO QUESTION SECOND.—The filling is put up in tin cans, similar to the English varnish can. We now give you the precise course adopted by Mr. Monks, foreman of Brewster & Co., Broome street. When the body comes from the wood shop, rub it down smooth with lump pumice stone; dust off carefully, and lay on a coat of the "Permanent Wood Filling," rubbing it well in, while wet, with lump pumice, which will bring it down to a level surface; now wipe off with cloths, leaving the work to dry twenty-four hours. Dust off clean and apply a second coat of the filling, being careful to drive it evenly and thinly. When this coat is dry, sandpaper lightly with old No. 1 sandpaper, (being careful to not cut through the filling,) to remove dust and runs, and apply your first coat of "rough stuff," mixed with oil and varnish, (add a small quantity of lead in English filling) The first coat of rough stuff being made elastic, prevents cracking. Let the job stand for three days, putty up, and apply two coats of hard drying rough stuff, as in the usual way. When the body is rubbed out, proceed to complete your work, as under the old system of lead painting.

For carriage-parts, sand-paper the wood smoothly, dust off and lay on a coat of the filling, skipping the iron work. When dry, sand-paper and apply a thin coat, going over the entire carriage. In twenty-four hours after, putty up; when putty is dry, sand-paper carefully, and apply an elastic coat of color, ground in oil and varnish, completing the carriage in the usual way. Avoid the use of turpentine as far as possible.

As the filling stains the wood, &c., of a walnut color, use a coat of lead in painting light colors.

On spring wagons, two coats of the filling is all that will be required, giving color and varnish as soon as the filling is dry.

By reference to Messrs. Valentine & Co.'s advertisement in the JOURNAL, you will find their address. Full directions for using the filling will accompany each can. The advantages over the old system of lead painting are as follows:

It fills the grain or pores of the wood permanently.

It never becomes hard or inelastic, and, therefore, will not crack or flake off.

It affords a better protection from dampness. It is not injurious to the health of the painter.

It saves time, labor and cost.

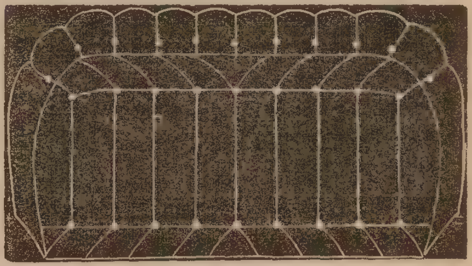
Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

THE PHŒNIX EAR DROP BACK.

NEW AND EASY TO MAKE.

This is entirely new and looks better than any other style lately offered, and it is so easy to make that it will well repay the labor expended on it. Try this style on one job, say a phæton, or a top buggy; it looks best as a drop back, hence its name; as for material, cloth or maroon leather.

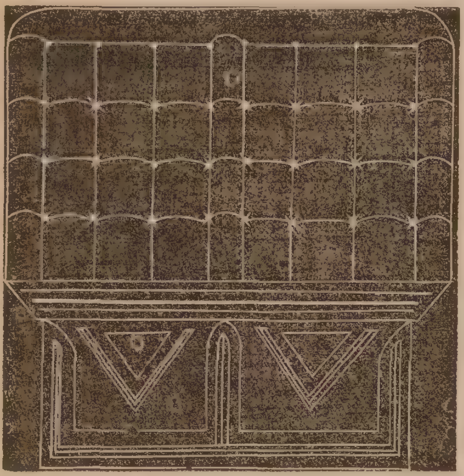


It is made up on four or five ply of buckram pasted, the first row of buttons to be $2\frac{1}{2}$ inches from the bottom, and at least three inches apart. The second row of buttons to be six inches from the top of the back; there are but two rows in the back proper, and $\frac{1}{4}$ of an inch fullness from the top to the bottom row of bottons with $1\frac{1}{8}$ inches fullness between the tufts, (to form the rolls;) the top of the back proper is finished $3\frac{1}{2}$ inches from the top edge, and a patent leather welt sewed on it to form the lower edge of the tufted roll as shown.

The buttons for the roll are only $1\frac{1}{4}$ inches from the line of the patent leather welt which finishes the top of back proper, and there is no fullness on the material from the welt to the button holes, but between the roll buttons $1\frac{1}{8}$ inches fullness, and from the roll buttons to upper edge make the roll very full, say $2\frac{1}{2}$ inches fullness. Cut a small scollop out of the lower edge of roll at the plait-lines so as to draw it tight from buttons to welt; from the last button on each side of the roll it is continued down to the bottom of back as a smooth plain roll, the welt finish to be continued all around and down to the bottom points. Bind the outer edge with a turn-over welt of patent leather, and finish the *top on the wood*, with seaming welt on the outside and a rubbed down leather welt inside. Take care to turn the pasting welt inwards from the seaming welt.

THE FALL AND CUSHION TO MATCH.

The cushion is very simple and is made up very much as a driver's cushion, (dicky-seat,) is made. Allow only half an inch fullness from the front to the back row of buttons, (all the way,) and the same from each of the middle rows to the outside row of buttons, but from the outer row of buttons, all around the sides, and back of cushion allow $1\frac{3}{4}$ inches fullness; and from the front row to front edge of cushion one inch fullness, and for the roll between the centre row of buttons $1\frac{1}{2}$ inches. Remember there is no welt sewed on to form this outer roll; the fullness given here will form the roll without trouble. The top should be made on a frame, and a stitch at each button hole mark to hold it to shape until the top is sewed in, and the cushion turned and stuffed. (See description of how to make a squab top cushion in a former number of Vol. III.)



THE FALL TO MATCH

Is made up on enameled duck, the three-square pieces are of carpet pasted on, and the lines on both sides of them are three-edged raisers cut very narrow, and pasted on, then all covered with the cloth, pasted. The border is of split leather stiffened and bound with a turned-over welt of leather on both sides. The lines are: first, an inch strap pasted on the split leather, and then a three-edged raiser, cut to the full width of what the raiser machine will cut, then pasted on and covered with cloth. When dry, to be stitched all around the raisers and carpet. The fall may be sewed to the cushion or not, as the case may be; for instance, if the seat panels are lined, you must nail on your fall, and then a strip, one inch wide and bound with leather on both edges, nailed on top of the fall. In this case, use two cushion straps, but if the seat panels are NOT lined, then sew in the fall to the cushion, and with straps sewed in. (See directions for cushion and fall in No. 1, Vol. III.)

The Cushion Front is made with three raisers on it, the centre one to show with patent leather on top of it, this raiser to be cut to the full size of what the three-edged raiser machine will cut; the others, one on each side, to be cut very small and show only as covered with the cloth. The small raisers can be cut in the raiser machine by simply putting a little wedge under the back of the knife to lift it up, thus depressing the point on the roller; by this means you can cut the raisers to any size, *no matter how small.*

I flatter myself that this is the most complete and simple, yet tasteful, style that has been offered, and I do not offer it as an ideal or imaginary affair; I have used and tried it and I find very little, if any, more work than is on a plain job. Try it.

N. B.—Next month I promise a sketch of inside quarter, door and back of a beautiful Clarence.

Poetry.

For the Coach-Maker's International Journal.

COACH-MAKERS.

BY GERALD.

Coach-Makers may be honest men,
  Although they have their "vises,"
And by them get their daily bread
  Without regard to prices.

We cheat, and so will every man;
  This difference though I'll grant,
Others will cheat whene'er they can,
  While we "cheat" when we "cant."

And much we do seems more alloyed
  Than well agrees with honest dealing,
For it is well known we're oft employed
  At "forgery" and "steeling."

To slavery we say farewell;
  On others rights we ne'er encroach;
Yet it is true we often sell
  A "Dutchman" hidden in a coach.

A President must soon be made
  And now we're termed "the masses,"
The canvass o'er 'twill be transposed
  And we'll be called "them asses."

* * *

THE PIC-NIC.

If to boil and to bake and to butter,
  To bottle, to slice, and to pack,
To get off before you are ready,
  And before you are ready come back;

If taking a seat in a pie-dish,
  And losing your meat in the grass,
And having bugs drop in the pudding,
  And snails take a bath in your glass;

If toads holding hop on your sandwich,
  And beetles inspecting your bread,
While brambles and thorns catch your feet,
  And worms pelt down on your head;

If scattering in every direction
  To seek from the foliage a cover,
And find you have just been outstripped
  By some Sary Jane and her lover;

If gathering up all the fragments
  Of such an Arcadian feast,
You can't tell whether 'twas most like
  Entertainment for man or for beast,

If that kind of thing is enjoyment,
  In longer or in shorter measure;
And you're simple enough to believe so,
  Why, then help yourself to the pleasure.

But for me, (I speak from experience,
  The subject I've closely pursued,)
The reply will be found in Scripture,
  "I pray thee have me excused."

Youth's Department.

For the Coach-Makers' International Journal.

THE WEATHERCOCK.—N. E. S. W.

BY CHRYSALIS.

"What use am I in the world?" quoth a weathercock, "perched up here on this high steeple, whirled and twirled by every passing breeze, and the letters N. E. S. W. beneath me hardly get a passing notice, while the pale-faced clock is the oracle of the universe." Everything has a place, however insignificant, and each one's place is for the best; be contented. Even the weathercock did some good as the following tales will show.

Far into the country, where the birds and flowers, and streams, and pleasant breezes, all throw their little mites together and make everything cheerful, a little lad is leaving his home. He is clad in homespun from top to toe. He is leaving home to seek a fortune in the great city, for they are too poor at home to keep him longer. No wealth is his save what the little blue cotton handkerchief holds: a stou theart, and a Christian mother's blessing. The few bright silver pieces jingling merrily in his pocket will procure him a lodging and a meal when he gets to the city.

Weary and way-worn the little traveler approaches the city, just as the setting sun gilds the church spire. Weariness brings discouragement. A stranger in a stranger land is he. No friend to greet him. No door open to receive him, and he feels very, very home sick. Upward he casts his eyes, and the weathercock, with its golden letters, N. E. S. W., meet them. "N. E. S. W.," he repeats to himself, "what can they mean?" Perhaps something to cheer him. Yes, they mean a motto for him. He reads in them: "*Noble Energies Secure Wealth.*" His whole heart is full of *noble energy*, and he enters the city determined to *secure wealth.*

At a little inn he stops for the night. Remembering to read the little Testament, which has been buttoned close to his heart all day, and kneel down and pray for those loved ones far away and that his noble energies may not only secure earthly wealth, but lay up treasures for him over beyond. The next day he obtains a situation. Everything is done with a *noble energy*, not only in his duty to his employers, but noble, kind and generous to all, which soon wins him the esteem and love of all his fellows, and he rises daily in the eyes of his employers. N. E. S. W. are his initial letters, and in five years from the time he entered the city a poor boy, he became a partner in his employer's business. He has also risen to be the Superintendent of the Sunday School, and by his noble energies is striving to win souls from destruction, and all through his life he found that N. E. S. W. leads not only to treasures here, but to treasures hereafter.

Thus the weathercock did somebody some good when the wind turned it N. E. S. W. The next time we will see what it done when it read N. S. E. W.

[TO BE CONTINUED.]

* * *

LATE AT SCHOOL.

The pupils of Mr. Jones' school had all, save one, entered the school and taken their seats, when George Hardy, the tardy scholar, for once, came hurrying in much out of breath.

"Why, George," said the teacher, "how is this! I saw you, as I supposed, on your way to school, when I started from home. I hope you have not been away to play, when you should have been at school."

"No, sir, I have not played any this morning, I thought I could run home, and be back before school commenced."

"But why did you wish to return home? Did you forget anything.

"No, sir."

"What did you go for, then?"

"If you please excuse me, sir, I had rather not tell."

"I hardly think I can excuse you, George, you are late, very late for you, and I have a right to demand a sufficient reason for it."

George stepped up placing his lips close to his teacher's ear whispered "I met a boy who was without shoes, and as I had a pair which I had out-grown, I went home to get them for him."

"Was that the reason?" asked the teacher looking upon the blushing boy with love and approbation."

"Yes, sir."

"Why, then did you not wish to tell me!"

"Because, sir, my mother says when I give anything in charity, I must do it privately, lest I should receive praise of men, and become vain and proud."

Trade Items.

The miners of the Mahoning Valley, after a strike of nearly four months, have agreed to resume work to-day. They number about fifteen hundred. The strike is a failure with them, they not receiving the additional twenty cents per ton demanded.

The striking bricklayers of New York City have begun to form a co-operative society which will erect buildings on the eight-hour plan. No one need object to this.

Co-operation at Peoria.—The molders of Peoria, Illinois, have recently established a co-operative foundry. The building is situated on the corner of Washington and Maple streets, where they are now prepared to execute all work pertaining to their branch of business. From our correspondent we learn that several contracts have already been secured, and that the prospects are all that could be expected. May success attend their efforts.

One of the most thriving establishments in Chicago is a wagon factory, founded thirty years ago by a poor mechanic, whose entire capital at starting was just sufficient to enable him to complete one rough farmer's wagon. It gave satisfaction to the man that bought it; it brought in plenty of new orders to the maker, and the factory is now turning out from five to seven hundred wagons per week.

A Good Work.—The Lippitt Woolen Company, at Woonsocket, R. I., has fitted up a bathing room in the mill for the use of the operatives, and has also established a relief society, for the benefit of any of the help who may be sick. The corporation pay weekly to its fund fifty cents, and the operatives who choose to avail themselves of the benefits of the association pay from two to ten cents per week, drawing from one dollar to five dollars per week in case of disability to labor, according to the amount of weekly payments. A large portion of the operatives are members of the society.

Success of a Co-operative Foundry.—About a year ago a co-operative foundry was established in Rochester after the plan of those in New York and Albany. It has proved a great success. Only a trifle over $18,000 was paid in. The profits for the six months ending December 19, were $8,392,82. A dividend of twelve per cent. on the stock has been declared, payable in stock, and the balance has been divided pro rata among the employes, making to them 29 3-10ths per cent. on their earnings.

The Co-operative Building Associations of New York City publish favorable reports of their operations. The first Union has already advanced $28,000 to borrowing members, besides having a large amount in bank. Thirteen members are now living in their own homes, ranging in value from $2000 to $5000. The premiums on appropriations already amount to $20,157, the interest on cash in bank to $679, and a large sum from fines. The Second Union Co-operative Building Association has advanced $17,600 to borrowing members, and has received premiums and profits on the above sum, amounting to about $12,000. The Third Union has advanced about $6000 to its members. The Co-operative Bureau Lot Society, established for the purpose of buying land in large quantities, now numbers 700 members, and has distributed one hundred and fifteen suitable lots valued at $250 each.

Scraps of Humor.

By a fashionable young married woman: the latest thing out—my husband.

The "Grecian bend" is all the rage; but we agree with Bridget when she says it is nothing compared to the Hibernian bend over the wash-tub.

The Springfield *Republican* tells of a horse which ran away in that city, "throwing the driver out, and cutting a severe gash in one of his hind legs."

A lecturer was dilating upon the powers of the magnet, denying any one to show or name anything surpassing it. A hearer demurred, and instanced a young lady who used to attract him thirteen miles every Sunday.

What strange creatures girls are! Offer one of them good wages to work for you, and ten chances to one if the old woman can spare any of her girls; but just propose matrimony, and see if they don't jump at the chance of working a whole lifetime for their victuals and clothes.

A little four year old was saying the Lord's prayer, and after he had finished it his mother said, "Now, Sandy, ask God to make you a good boy." The child raised his eyes to his mother's face for a few minutes, as if in deep thought, and startled her with the following reply: "It's no use, ma. He won't do it. I've asked him a heap of times."

Two Sucker girls, driving in a buggy on a plank road, were stopped and asked for toll. "How much is it?" "For a man and a horse," replied the gate-keeper, "the charge is fifty cents." "Well, then, git out of the way, for we are two gals and a mare. Git up, Jenny!" And away they went, leaving the man in mute astonishment.

A Polite Traveler.—A loquacious gentleman, finding himself passenger in a coach with a prim and taciturn maiden lady of some forty winters, tried in vain to engage in conversation. At length night came. As nothing was said, both fell asleep. The stage finally stopped, and the driver announced to the lady that she had arrived at her place of destination. Her fellow-passenger, being awakened at the same time, thought he would exchange a word at leaving, and addressed her: "Madam, as we shall never again probably sleep together, I bid you a very respectful farewell." A scream, and silence reigned again.

A Negro's Simile.—An old negro named Pete was very much troubled about his sins. Perceiving him one day with a very downcast look, his master asked him the cause.

"Oh, massa, I'm such a great sinner!"

"But, Pete, said his master, "You are foolish to take it so much at heart. You never see me troubled about my sins."

"I know de reason, massa," said Pete. "When you go duck shooting, and kill one duck and wound another, don't you run after de wounded duck?"

"Yes, Pete," and the master wondered what was coming next.

"Dat is de way wid you and me; de debbil has got you sure; but as he am not sure of me, he chases dis child all de time."

An Amusing Incident.—A strange appearing genius on his first visit to this city observed a sign over a store, thus:

"Wholesale and retail store." He worked his way through the crowd of ladies, until he faced one of the clerks, who was exhibiting some articles to a young lady, when he broke out with:

"Say, mister, who's boss here?"

"The proprietor has just stepped out, sir."

"Well, is this a retailing shop?"

"Yes, sir, a wholesale and retail store."

"Guess you understand your trade?"

"O, yes," replied the clerk, wrapping up a bundle for his lady customer, "what can I do for you?"

"Well, as the cold weather is coming on, I thought I might as well come and give you a job."

"I don't understand you, sir," replied the clerk, who began to suspect that the fellow was in the wrong box.

"Zackly so; well, I'll tell you."

"Explain what you mean, my friend," said the clerk, as he saw him produce a roll from under his coat.

"Well, as I said before, the cold weather's coming on, I thought I might as well be fixin' for it. Come mighty near freezin' t'other winter, well I did, but—"

"I hope you will tell me what you want, that I may serve you."

"Certainly, squire, certainly; I always do business in a hurry, and just as quick as the old master will let you I want you to retail these old shirts. Let them come down about to the knees, kase I don't wear drawers.

The effect may be imagined, but, as novelists say, can't be described. The loud laugh which followed served to convince the poor fellow that he had committed himself, and his long legs were put in motion for the door.

Remedies and Receipts.

Rub your griddle with fine salt before you grease it, and your cakes will never stick.

Preservative for Flowers.—As much nitrate of soda as can be held between the thumb and fingers will preserve flowers for the space of a fortnight.

Johnny Cake.—Three cups of Indian meal, one cup of flour, one-third of a cup of molasses, a little salt. Mix the whole with buttermilk or sour milk, with a teaspoonful of soda dissolved in it. The batter should be rather stiff. Bake in a quick oven.

Wheat and Indian Bread.—Scald two quarts of Indian meal with boiling water; when sufficiently cooled, add a teaspoonful of salt, half a pint of good yeast, and half a teacupful of molasses; knead into it sufficient flour to form a dough; set it to rise, make into loaves, let it rise the second time, and bake in a moderate oven.

An Excellent Bun.—Take one pound of fine flour; rub into it half a pound of butter and half a pound of sugar, the same of currants, a little nutmeg, mace and cinnamon; mix it with five eggs, well beaten. Make this up into small buns, and bake them on tins twenty minutes; when half done, brush them over with a little hot milk.

Plain Sponge Cake.—Place two teacups of brown sugar in a cake bowl, with one teacup of lard and a half teacup of carraway seeds. After mixing to a foam, add two teacups of sour milk, and stir well again; sift with the flour one teaspoonful of baking powder; four teacups of flour may be needed, perhaps five. When the flour is well blended in, add one teaspoonful of soda, previously dissolved in a little water. Bake in a well larded tin for at least an hour in a moderate oven.

To **Freshen Salt Fish.**—Many persons who are in the habit of freshening mackerel or other salt fish, never dream that there is a right and a wrong way to do it. Any person who has seen the process of evaporating going on at the salt works knows that the salt falls to the bottom. Just so it is in the pan where your mackeral or white fish lies soaking; and, as it lies with the skin-side down, the salt will fall to the skin, and there remain, when, if placed with the flesh-side down, the salt falls to the bottom of the pan, and the fish comes out freshened as it should be. In the other case it is nearly as salt as when put in.

Miscellaneous.

Save when you are young to spend when you are old.

One great cause of failure in life is giving other people credit for more than they know.

Would you hear a sweet and pleasing echo, speak sweetly and pleasantly yourself.

A **Frenchman** has invented a vehicle in which the "cart really goes before the horse."

Keep doing, always doing. Wishing, intending, murmuring, talking, sighing, and repining are idle and profitless employments.

To maintain or to allow that labor is not respectable, proves only one part of mankind to be knaves and the other part fools.

If Adam's life had been spared, it is said he would be 5862 years old on the 13th of next month.

To be happy, the passions must be cheerful and gay, not gloomy and melancholy. A propensity to hope and joy is real riches; one to fear and sorrow, real poverty.

A **firm** faith is the best theology; a good life the best philosophy; a clear conscience the best law: honesty the best policy; and temperance the best physic.

Some absurd people will not believe the assertion, but it is, nevertheless, true, that the most valuable as well as the most useful stone the world knows anything of is the grindstone. It is worth to man all the diamonds the world possesses, or is likely to possess.

The Needle Gun.—Two new improvements in the famous needle gun (zundnædel gewehr,) it is stated. have recently been submitted to the Prussian War Office for approval. One, which is the invention of Lieutenant Random, gets rid of two movements in loading, and increases the rapidity of fire about twenty-five per cent. The other, which is due to a country gentleman named Borst, also gets rid of some of the movements, and nearly doubles the rapidity of firing, raising it to fourteen or fifteen shots per minute. The latter invention, it is stated, moreover fills up the hollow chamber behind the charge, diminishes the escape of gas, and increases the force of the explosion.

Improvement in Carriages.—Alvah and Edgar W. Pate, Nankin, Wayne Co., Mich. The object of this invention is to simplify and cheapen the construction of all vehicles in which springs are employed, and consists in fastening to the axles four "C" springs. These are constructed with several leaves, and their lighter ends are attached to the axles by proper clips. Each leaf is provided with a clip upon its edges which grasps the next leaf outside, preventing breaking or unequal action. The upper ends of the rear springs are secured to the body of the carriage, while upon the upper ends of the front springs rests a semi-circular frame, the rear of which is sustained by, and rotates upon a friction roller journaled into a hanger suspended from the centre sill of the body frame. Surmounting this frame is a circle, upon the upper surface of which the fifth-wheel works, and which is secured to the under side of the carriage-body; a suitable king-bolt secures the whole together. This invention is a great step ahead in the construction of buggies and carriages, furnishing an easier vehicle than any now in use, and cheaper withal. —*Exchange.*

Sharpening Edge Tools.—The Mark Lane *Express* translates the following from a German scientific journal, for the benefit of machinists and agricultural laborers:

"It has long been known that the simplest method of sharpening a razor, is to put it for half an hour in water, to which has been added one-twentieth of its weight of muriatic or sulphuric acid, then lightly wipe it off, and after a few hours set it on a hone. The acid here supplies the place of a whetstone, by corroding the whole surface uniformly, so that nothing further than a smooth surface is necessary. The process never injures good blades, while badly hardened ones are frequently improved by it, although the cause of such process remains unexplained. Of late, this process has been applied to many other cutting implements. The workman, at the beginning of his noon spell, or when he leaves off in the evening, moistens the blades of his tools with water, acidified as above, the cost of which is almost nothing. This saves the consumption of time and labor in whetting, which, moreover, speedily wears on the blades. The mode of sharpening here indicated would be found specially advantageous for sickles and scythes."

Answers to Correspondents.

F., Greenville, Pa.—Much obliged for the circular sent us. It would have been more satisfactory to us had you given your full name. We would then have been better able to judge of the invention by the testimony of those who have proved its usefulness by experience. To all appearances, it is a good invention; but we shall endeavor to inform ourselves in regard to its practical workings before we lay it before our readers.

Many Subscribers, Baltimore, Md.—We thought it was generally understood that we do not publish anonymous communications. Give us your real name, and we will take pleasure in explaining our reasons for our action. The signature, "Many Subscribers," we think is rather overdrawn, for there are but two subscribers in Baltimore really affected by the arrangement, and we feel pretty well satisfied that neither of them consider any injustice has been done them, but, on the contrary, a special favor shown them.

G. B. G., Hornellsville, N. Y., (and others.)—We have entirely exhausted our supply of the three edge raiser machines, but have ordered a fresh supply from Mr. T. Acks, and will be able to fill your orders in a few days. He writes us the demand is so great at home and vicinity that he will be obliged to ask a flag of truce for a week or so, until he can replenish his stock.

A. D., Forsyth, Ga.—It will be impossible for us to get the information you desire to any certainty, being entirely unacquainted with that business, or those engaged in it.

W. G.—Your sketches and illustrations are received, but too late for insertion in this number. They are very good, and we shall be glad to hear from you often.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted.—The address of persons building barouches, light Jersey wagons and rockaway bodies for the trade.

Wanted.—The address of persons building cutter sleighs, ready for ironing and painting, and the cost of one and two seated cutters; (the wood work only.)

Wanted.—A good body-maker on light and heavy work. Address P. Palmer, York, Pa.

Wanted.—Two first class wheel-makers. Address Charles S. Caffrey, Camden, N. J.

Wanted.—Every coach-maker to try the Permanent Wood Filling. Sold by Valentine & Co., 32 Kilby street, Boston, Massachusetts.

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY
SCOTT & DAY, NO. 38 NORTH THIRD STREET.

Philadelphia, October 1, 1868.

Apron hooks and rings, per gross, japanned, $1.20 to $1.50; silvered, $9.
" snaps, silvered, per gross, $5.25.
Axle-clips, Coleman's Philadelphia List price, per doz.: No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 30 per cent. discount.
Forged, Coleman's Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15½ per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.
Axles, long, common, per lb., 7c.; leather washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50.
Axles, Wilmington, C. H. Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.
Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
" Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.
Axles, Archimedian, short, improved taper, No. 1, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $7.75; 1⅜, $10; 1½, $12.50.
" " Half pat., taper No. 3, ⅞ and 1 in., $6.00; 1⅛, $7; 1¼, $8.25; 1⅜, $10.50; 1½, $13.
Axles, Archimedian, Long, improved taper, No. 2, ⅞ and 1 inch, $7.50; 1⅛, $8.50; 1¼, $10.25; 1⅜, $13.50; 1½, $16.50.
" " Half pat., No. 4, ⅞ and 1 inch, $8.00; 1⅛, $9.00; 1¼, $10.75; 1⅜, $14; 1½, $17.00.

The Archimedian axles are all case hardened; they can be made of Salisbury and Lowmoor iron at an average advance on prices here quoted of $1 to $2.50 per sett. An axle of this brand is also steel converted by the celebrated Bessemer process; it cannot be excelled. Price of short half pat., per sett, ¾ inch, $11; ⅞, $12; 1 inch, $13. Long do., ¾, $13; ⅞, $14; 1 inch, $15.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.: large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.

Bolts, Coleman's Phila., 35 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1: 1 inch, $1.30.

Buckram, per yard, 17 to 20c.

Carpet, per yard, Brussels, $1.90; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 50c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13½c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.90 to $2.

" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, per doz., japanned and sil., $1.10 to 1.50.

Damask, German cotton, double width, per piece 30 yds., $18 to $21; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 80c. per yard.

Dashes, buggy, per dozen, rough, $20; silver plated, $28. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 36c.; 6-4, 55c.; drilling, 5-4, 46c.; 48 inch, 50c.; 6-4, 63c.; duck, 5-4, 68c.; 50 inch, 72c.; 6-4, 80c.; pat. tan back muslin, 5-4, back 55c.; do., drill, 5-4, 65c.; 48 inch, 70c.; flock drill, 48 inch, $1.05; do., muslin, 90c.; vulcanized rubber drill, heavy, $1.75; light, $1.60.

Felloe plates, wrought, per lb., 16c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.

" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Patent Improved Knob and Buttonholes, a good improvement, $6 per gross.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 8c.; silk stripe, 10½c.; silk barred, 13½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 17c., do., No. 2, 15c.; railing and collar, 26c. to 29c.; enameled top, No. 1, 28c. to 31c.; do., No. 2, 26c. to 29c.; enameled trimming, 26c. to 29. Pat. collar, 28 to 30; bow leather, 26c. to 29c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $5.00 per gr.

Moss, per lb., 10c. to 12c.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

" spoke tenoning machine, each, small, $15; large, $25.

" bolt cutting tenoning machine. each small, No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Name plates, per dozen, engraved, German silver and real silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.: do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, star and flint, per ream, $4.50 to $6.00.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.

" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.

" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, patent black, $11.75; do., Bright, $13.75; Baltimore patent black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.

" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $5.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95, 1⅛. $2.10; 1¼, $2.25.

" ball, ¾ inch, $2.05; ⅞, $2.20; 1 inch, $2.35; 1⅛, $2.50; 1¼, $2.65.

" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.

" close plated, extra heavy, plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.

" ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.

" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6

" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8.25; 5 bows, $10.50.

" " New York patent, per dozn setts, 4 bows, $12.

" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.

" plated, short, $1.20; 1 long iron, $1.37.

" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 16c½.; Bright, 17c.; 1¼ inches, 1c. per lb. more.

" Bright tempered, per lb., 1¼ in., 21c.; 1½ in., 20c.

" Black Springs, 1½ inch and wider, 16½c.

" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50: ⅝, $1.70.

" long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

" Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top props, silvered, per sett, common, 31c.; extra, 70c. to 90c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.

" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.

" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.

" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.

" " Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors. No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; ½, $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, $3.

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 55c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rubber, per dozen, No. B, $3.50; No. C, $3.75.

" improved, all black, per dozen, $1.75; black, silver top, $2.

" imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.25 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

Wood-work.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75: post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.

" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

" white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.

" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.

Hubs, morticed gum, 2¾ to 4⅞ inch, diam., per sett, No. 1, 1.00c.; 5 to 5½ inch, No. 1, $1.10; extra, 3½ to 5 inch, $1.40; 5 to 5¾, $1.75; double extra, 3½ to 5 inch, $2.00; 5 to 5¾ inch, $2.25.

Poles, hickory, per dozen, rough, $12; finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; fihished do., $12.

" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts, express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.38.

Seat rails, whole, hickory, $7 per dozen; lazy backs, $8 per dozen.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hickory, per sett, 1½ inch and under, No. 1, $3: extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.

136, 138 *and* 140 *North Fourth Street.*

Varnishes—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4. carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.50; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

Paints—Black—Raven's Wing drop, per lb., 45c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.: pure emerald, 50c.; pure Paris, 50c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Vermillions—English pale, $1.60; deep, $1.50, German gothic pale, $1.50; deep, $1.50; Chinese, $1.60; Trieste, $1.25; Italian, 45c.; American, 35c.; English Venetian, 5c.; red lead, 15c.

Whites—Pure lead, per lb., 15c.; Colorado lead, 13½c.; Nevada, 11½c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c.; English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $2.00; turpentine, 65c.; linseed oil, $1.20; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 10c.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4.

Best Paint Mills—Large, $8; small, $6.50.

IRON AND STEEL.

CORRECTED BY WILLIAM M. WHITAKER,

No. 52 *North Front Street.*

NET CASH.

Tire Iron, Merchant, 3¾ cents per pound; refined, 4½c.; 1x¼. 4¾c. Refined Round and Square Iron, ½ and 9-16, 4¾c.; 7-16 and ⅜. 5c. 5-16, 5½c.; ¼, 5¾c.

Oval and Half-Round Iron, ¾, 5½c.; ⅝, 5¾c.; ½, 6c.

Band Iron, 5½c.

English Refined Slit Rods, 6¼c.

Scroll Iron, ⅞ and 1x3-16, 6c.; ¾ and ⅞x⅛, 6¼c.

Steel Tires, Swedes, 1x3-16, 11½c.; ⅞x3-16, 11¾c.; ¾x⅛, 12c.; ⅝x⅛, 13c.

Spring Steel, 1¼ and larger, 10¼c.

Norway Horse Nail Rods, 8 cents; do., Shapes, 8 cents.

American Rolled Horse Shoe Rods, 5½c.

American Hammered Iron, 6½c.

" " Axle Trees, 7c.

☞ Notice.—In remitting, name at the top of your letter your post-office county, and State. If possible, procure a post-office order on Philadelphia. If a post-office order cannot be had, get a *draft* on Philadelphia or New York, payable to our order. If a draft cannot be had, send a *registered* letter. *Do not send money by the express companies unless you pay the charges.*

Any person having sent a club may add other names at any time during the year. The Journals for a club may be sent to different post-offices. When the directions of a Journal is to be changed, say at what post-office it was received, as well as the one it is to be sent to in future.

PERMANENT WOOD FILLING.

A NEW SYSTEM FOR PAINTING CARRIAGES, RAILROAD CARS, &C.,

INVENTED AND PATENTED BY W. PIOTROWSKI, FEB. 17, 1867.

Superior to White Lead or any other Filling now known, being much QUICKER, CHEAPER and BETTER, and in every way worthy the careful attention of Carriage and Railroad Men throughout the country.

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SOLE MANUFACTURERS AND AGENTS.

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JOHN CURTIS, Cincinnati, Ohio.
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R. SLADE & SON, Boston, Mass.
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Samples of work can be seen at any of the above places, and at our office, where we shall also be glad to show our numeorus testimonials from parties who are constant consumers of the above Filling.

VALENTINE & CO.,
VARNISH-MAKERS, BOSTON.

We also invite attention to the following List of our Varnishes, Japans, &c.:

NONPAREIL COACH AND RAILWAY VARNISHES.

NONPAREIL FINISHING BODY, NONPAREIL RAILWAY BODY, NONPAREIL CARRIAGE FINISHING,
NONPAREIL RAILWAY RUBBING, NONPAREIL RUBBING BODY.

COACH VARNISHES.

CROWN COACH BODY, CROWN COACH RUBBING, EAGLE CARRIAGE,
No. 1 COACH COACH, BLACK ENAMEL LEATHER.

DRYING JAPANS.

JAPAN DRYER, CROWN COACH JAPAN, JAPAN GOLD SIZE.

FURNITURE VARNISHES.

FINE PIANO POLISHING, FINE PIANO FLOWING, SOFT SCRAPING, (Plumb's Rubbing,)
WHITE COPAL. A 1 COPAL, (very light shade,) No. 1, FURNITURE, (light shade,)
FURNITURE, WHITE DAMAR, PARLOR WHITE.

BLACKS.

BLACK ASPHALTUM, (Walnut Stain,) No. 2 BLACK, EAGLE BLACK, EAGLE BLACK BAKING JAPAN,
JET BAKING JAPAN, BLACK BAKING JAPAN, BROWN BAKING JAPAN.

MISCELLANEOUS.

SPIRITS COPAL, RUSSETT TRUNK. PURE SHELLAC,
IMITATION SHELLAC, SHELLAC SOLVENT, SPIRITS COPAL SOLVENT.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. IV.—No. 2 NOVEMBER, 1868. $3.00 PER ANNUM Always in Advance.

AUTUMN.

Spring and summer having passed, we may now look back with no slight degree of satisfaction, as we see the labors of the husbandman amply repaid. The early and latter rains have been vouchsafed; skilled labor has been applied to the soil, and from the agricultural reports we learn that the cereals at least have yielded a harvest larger than has ever been garnered in the United States. The barns are bursting out with plenty; the orchards have yielded their fruits in rich and exquisite variety; the vines have contributed their delicious pulp; the grasses have bowed in heavy luxurience, and fallen at last before the mower in an unusually large crop. Truly the earth has dropped fatness for man and beast. The heart of man is moved to thanksgiving to the Giver of all good, for He has crowned the year with His goodness.

The prices of flour will probably rule lower, which will be a great blessing to the masses. The exorbitant prices which have been and are still being paid for house rent, clothing, and all the necessaries of life, have tended to make the working people fret and chafe in their harness, and at last to seize the bit, and rush off wildly, endangering themselves and their drivers. How few persons in easy circumstances would believe the tale of suffering that could be told during the last few years among the mechanics of America.

Even among those who have received the highest rate of wages paid to skilled workmen, you may see in the care-worn countenance and scantily clad family, the visible marks of want. How often have the day and Sunday School teachers missed bright and beaming countenances from the classes, for the want, on the part of the parents, of sufficient money to purchase suitable clothing, or even a pair of shoes for the little ones.

We hope for better times in the future. With the return of prosperity and reduced rates in living, a better feeling will be engendered between capital and labor, and the machinery of trade and commerce run more smoothly, and with increased profits to each. The following harvest items, from the *Trade Journal*, will be read with pleasure:

"It is estimated that this year's crop of wheat will amount to 200,000,000 bushels, being an increase of twenty per cent. over the yield of 1860, (173,104,924.) Rye, oats, and barley are represented to be abundant, though showing a smaller per centage of increase. In some sections there has been a light yield; but taking the increased acreage of the whole country into consideration, there is probably a gain on these crops of 1860, which were 27,101,308, 172,634,185, and 15,875,898 bushels respectively. The corn crop gives promise of being the largest ever grown.

In 1860 the crop was 838,792,740 bushels, and it is confidently expected that the yield this year will reach at least 1,000,000,000, or a gain of about twenty-five per cent. Beside the great staples enumerated, there has been a substantial increase in countless other essential farm and garden products. The grass crop this year has been unusually large; thus not only furnishing a munificent supply of hay, but an increase of pasturage, and, consequently, of dairy products, fat beeves, and other live stock. The reports from the Southern States are equally cheering."

So far as we have heard, the fall trade in the carriage line is very quiet, probably owing to the pending political canvass. Feeling confident, however, that in the good sense of the people will be found a sufficient safeguard against any serious political disturbances in the country, whatever may be the issue of the Presidential election, we may safely predict a good spring trade.

TRIP TO WILMINGTON.

According to previous arrangement, we started on Wednesday morning, October 14th, from Philadelphia, to pay a short visit to the coach-makers of Wilmington. This being our first attempt away from home in the interest of the JOURNAL, we felt no slight degree of anxiety as to the result of our labors. A cold drizzling rain falling at the time, and a murky atmosphere to breathe, were not well calculated to inspire cheerfulness.

Having decided to go by water, we were on board the steamer in good time, and about nine o'clock we swung out into the noble Delaware, and were soon steaming down the river. A hazy lead-colored tint pervaded the landscape, making the vessels under sail in the distance appear like spectres from the spirit world, their sails alone being visible. Below the Navy Yard we passed two war vessels lying quietly side by side. The one lying nearest to us in passing was painted the misty lead color used in the navy during the late war, a color in keeping, we thought, with the surrounding atmosphere. Four broadside guns frowned upon us as we steamed past, but as we did not show fight we were permitted to go our way in peace. Further on, we saw three huge black monsters lying near each other, covered to protect them from the weather. The terrible looking beak and round turret bespoke their character. We imagined they were waiting to hear from Hon. Reverdy Johnson, and with a shudder at the thought of their pent-up destructiveness, we hurried into the cabin, and by a cheerful fire turned our thoughts to the business before us. Arriving at Wilmington about 12 o'clock, we were soon seated discussing the merits of a good dinner; for who has any courage when he is in the company of a gnawing appetite.

After the dinner hour we entered heartily into the work laid out, visiting, during our stay, the principal shops in the city. We were cordially received in every factory, employers and employees aiding in the work. We take this opportunity to thank the employers of Wilmington for the uniform kindness shown us. We have many cities to visit during the year, and will, wherever we go, remember you, kind friends, "whatever sky's above us." A day and a half spent in canvassing added not a few names to the Journal's roll book, and we bid good-bye to Wilmington, shaking hands with the generous Hasson on the morning of our departure, highly pleased with our trip to Wilmington.

C. W. V.

TATTLERS.

Every man who has ever handled a plane, a hammer, a brush, or the shears, in a coach factory, has experienced the discomfort of shopmating with a tattler. Invariably posted as to the intentions of the proprietors, and as fully advised as to the murmurings of the jours, nothing so delights him as conveying from one to the other the information his Paul Pry disposition enables him to glean, distorting facts in such a bare-faced manner as to array in open enmity, with each other, the bosses and the men. The tattler, upon Saturday night, invariably receives a considerable per cent. of wages less than his fellows, which fact he ascribes either to error or willful cheatery upon the part of the person whose business it is to audit the shop accounts; this, of course, provided he be working by the piece. If his labors are paid for by the day or week, his work is never properly performed, and when called to account by the proprietor he runs whiningly to his shopmates, and in exaggerated terms disclaims loudly against the oppression of employers in general, and his own in particular. If the good sense of his companions induces them to decline striking, he predicts the downfall and vows vengeance to the Union. He is the immediate cause of more disagreement between the employer and employed than all other causes combined, and ultimately brings both the work of the shop and the credit of the men into disrepute. Beings of this contemptible nature are indigenous to every country.

Contentment neither knows them nor those sufficiently unfortunate to be shopmated with them. Professional grumblers are not always tattlers, but tattlers are invariably grumblers. Their path through life is one of thorns, and even should they in their journey occasionally stumble over an oasis of prosperity, their tattling propensities soon secure their expulsion, and they are compelled to resume their journey, doubly miserable that their discontent has ceased to be contagious.

The tattler is but one of the innumerable stumbling blocks in the way of the advancement of the toiler, and when the hand of unrelenting death removes one of them from our midst, unchristianlike as it may seem, we are devoutly thankful.

TAXES.

All governments are supported by taxes levied upon the people. In Republican or Democratic governments, the aim is to so distribute the taxes as to secure from each and all alike, always in proportion to the amount of property held, or income received by each.

To devise means by which this object is to be most easily attained, has puzzled the brains of many wise, or reputed to be wise men, in all matters appertaining to State government. In this country, in Congress is invested the exclusive right to "levy and collect taxes." This much every school boy knows, but how this most important function is to be most justly and successfuly executed, is not so easily ascertained; and this almost universal ignorance that prevails among the people in regard to this and other matters of finance, is attributable to the idea that has so extensively obtained, that in government finances is presented a problem too abstruse for ordinary minds to solve.

It is a notorious fact that men who aspire to congressional honors, and who profess to be thoroughly posted in all matters of national interest, are woefully ignorant upon the simplest questions touching finance; and it is equally notorious that our representatives in the national councils, with the exception of a few, who make of them a specialty, never bestow a thought upon such matters, unless they be in actual discussion before the respective houses.

There is no one to whom this question is so important as to he who labors for wages, for upon him falls the burden of taxation, and yet he of all others is the least likely to "bother his brain with what don't concern him," as he, in his ignorance, expresses it.

Ordinary common sense, and sufficient "book knowledge" to know how to read, write and do a little ciphering, will find but little difficulty in posting itself upon these matters to a sufficient extent to prove that the private interests of a select few, are the dictating spirits of our tax laws.

As our tax schedule stands at present, we admit that no ordinary intellect can compass them; but this we do know, that a mere cursory glance at these laws is sufficient to show an absence of justice in their compilation.

We have neither space, inclination, nor opportunity to explain wherein they are not in accordance with the spirit of Republican institutions, except in general terms. Our object being to impress upon the minds of the laboring people the importance of paying more attention to such matters than they have heretofore done.

It is an impossibility to construe an argument of this kind to be of partisan character, as both Republican and Democratic presses and speakers readily concede that the laborer is the structure underlying and solely supporting our great social fabric. In truth, they cannot do else. There are hundreds of branches of industry that bear more than a just proportion of the burden, while others are, without justice, partially or wholly exempt from any portion of them. If the people wish to understand they must study, and when they have attained a knowledge of the injustice of the existing system, they will not be long in enforcing a change of tactics on the part of their public servants.

There are no governmental matters that an intelligent people may not understand if they so will it, and there are no governmental abuses incapable of remedy by the people if they so decree.

We have said intelligent people, and by that we mean such as are endowed with ordinary common sense, and an ordinary common school education. Our periodical financial revulsions are greatly attributable to our illy distributed tax laws, and our only wonder is that our country's advancement has been so rapid, in the face of such a stumbling block. Workingmen must read, reflect and act, and the result will be in the greatest extreme beneficial to all classes, only excepting the privileged few who now fatten at the expense of their fellows.

ADVERTISE NOW.

This is the time to advertise. People stay at home winter evenings to read, and they seldom lay aside a work of this kind until they have read from the number on the first page to the last line on the cover. You say business is dull and it don't pay. Look at the policy of the New York *Tribune* when business is dull and money scarce. Then Sinclair advertises the *Tribune* extensively all over the land, and sows his posters, "Now is the time to subscribe" throughout every State in the Union, and what is the result? Unexampled success. This, of all others, is the time for dealers in carriage goods to advertise. Manufacturers are getting up their spring work and must buy of some one, and the best way to get your share of trade is to keep your name prominently before the people, and there is no better medium of reaching those who use your wares than through the Journal. Every copy goes direct and is preserved for reference. Patentees of carriage improvements should patronize the advertising columns of the Journal if they expect to succeed.

VOLUMES II AND III.

Having succeeded in procuring a few of the missing numbers of Vol. III, we shall have the two volumes bound in one, and a few copies to dispose of. We expect to have them ready for distribution by the 7th of November, and orders for them will be filled until our supply is exhausted. Price $5.00, if called for; when sent by mail, post-paid, or express, C. O. D., $5.50 will be charged.

Remember we have but few copies to dispose of, and first come first served.

CLUB RATES.

Notwithstanding the heavy outlay and extra expense in furnishing the Journal in its enlarged and improved form, we have placed our club terms at the same price we received for Volume III. We do this to give each one, however limited his means, the opportunity to secure for himself a copy. We know very well a publication based on a low subscription price with a large circulation has a firmer foundation than high rates and a very limited subscription list; and we are satisfied that we can furnish the Journal in its present style (if supported as we have every reason to believe it will be) with our club rates for ten or more at the low price of $2. Persons getting up clubs can have them directed to each subscriber, if desired, and will not be restricted to any one post-office.

Additions can be made to clubs at any time, at club rates, by the getter up of the club. We trust our friends in all sections of the country will spend a few leisure hours in soliciting their comrades to join them in making up a club. Some are already at work, and the mail gives daily strong evidence of the almost universal appreciation of our efforts to produce a work highly beneficial to the craft and an ornament to the trade it represents. Send in your names and money. The larger the circulation the better we can afford to make the Journal.

WE.

We dislike to be continually prating of ourselves or our labors, else it might possibly lay us open to the charge of egotism; but the unmistakably appreciative manner in which our enlarged Journal has been received has filled us to overflowing with supreme satisfaction.

The enlarged Journal is already an undoubted success. Our daily receipts attest that fact beyond cavil. Commendatory and congratulatory letters flow in upon us in copious streams daily. The press, almost universally, applies to us such opprobrious epithets as the following: "The best and cheapest mechanical magazine extant;" "A work worthy the patronage of every Coach-Maker in the land;" "The *ne plus ultra* of mechanical monthlies." These quotations might be continued *ad infinitum*, but we have given sufficient to convey to the reader the almost unanimous opinion of our brethren of the quill. The names on our "list" are increasing with amazing rapidity, and at no period in the history of our enterprise have we had as great occasion to congratulate ourselves upon the result of our efforts to interest and instruct the coach-making community as at present.

The infamous flings of our envious contemporary, instead of having retarded our progress, have proven a fruitful source of profit to us. We never did, nor shall we encourage either open or hidden opposition either of employer to employed, or employed to employer, and herein lies the secret. Unlike an individual, whose name we refrain from mentioning out of respect to our quill, the symmetry of our literary proportions are never marred by strapping unto them unbearable loads of abusive slang.

But, reader, because our success is assured we do not desire that you should relax your exertions in our behalf, not by any means. There are hundreds of localities where from one to ten, or twenty subscribers, are to be had for the asking. These we hope and confidently expect to receive ere the close of our first quarter. Depend upon it, that every dollar received by us, over and above our immediate wants, shall be expended to make the Journal as near perfection as mortal man can attain.

WINTER EVENING EMPLOYMENT.

As winter approaches the genial fireside increases in attractiveness. The bleak winds allow of but few out-door enjoyments, and reading becomes more popular. Coach-Makers, like other mortals, must purchase their reading matter. To them, one and all, we say, why not combine instruction with amusement? Send us $3, and we will mail you, monthly, a work from the pages of which you may glean much valuable information, while, at the same time, it will render both pleasant and profitable your unoccupied winter evenings at home. If $3 is a sum beyond your ability, or your inclinations to pay, by a little exertion you can secure a club of ten subscribers, which will decrease the cost of our publication to $2 for the year. Send in your names at once.

BONNER'S TURN-OUT.

With this number of the Journal, we send to all who have subscribed for the present volume a copy of our splendid steel plate engraving of Mr. Bonner's famous team Lady Palmer and Flatbush Mare, driven by himself, at a 2 12 gait, to a late style road wagon manufactured by Brewster & Baldwin of New York City. We feel gratified to be able to say that in our effort to produce an excellent and desirable picture, our expectations have been fully met, and we present to our readers a token of our friendship and good-will in keeping with the style and usefulness of the Journal.

To the Messrs. Illman Brothers, steel plate engravers, in this city, much credit is due for the correctness and workmanship of the engraving. Any one whose subscription does not expire until the close of the present volume, failing to receive a copy, will please notify us immediately. Mistakes may occur, but we shall make them as few as possible.

We do not wish to deprive any person from receiving a copy, but we cannot afford to give to short time subscribers. *Any one whose subscription expires before the close of volume, by sending sufficient to pay for balance of volume, will be entitled to a copy of engraving. All new* YEARLY *subscribers will receive a copy of the engraving.*

NEW CATALOGUE OF CARRIAGES.

We have received a copy of the Illustrated Catalogue of Carriages, published by Messrs. Brewster and Baldwin, 786 Broadway, N. Y.

It contains 300 designs of carriages and sleighs, also colored crests and styles of striping, and original monograms. Many of the styles of carriages are new and original.

The work is gotten up in excellent style, and will, no doubt, satisfy a desire often expressed by manufacturers throughout the country.

The reputation already established by the above named firm should secure a liberal patronage to a work indispensable to carriage manufacturers. The price is $10.

Fashion Plates Explained.

ELLIPTIC HEARSE.

Plate No. 5.—The oval hearse having become so common, there seemed to be a demand for a change. Although none of this pattern are yet running on the streets, there are some being built, having the same style of glass in the side, though very much different in other respects. Our artist, in producing this design, has combined practicability with beauty and neatness, and we think his efforts to meet the present want for a vehicle of this kind will be appreciated.

Dimensions: body, 42 inches wide. Panel, bottom of glass, put in a groove. Chamfered mouldings, ½ inch deep, 2-inch turn-under, slight swell. Top panel, glued on the outside of frame work. Lining underneath, rabbeted to receive the glass. Raised panels on the corners, double doors in the back, with glass, square at the bottom, elliptic at the top, corresponding with side finish. The track for the coffin should be 18 inches wide, sunk 2 inches, with a hole cut (with a lid) in the centre, say 2 feet long, for letting out water when washing. To form the track, use ½ inch square iron; wheels for the truck, with a flange on the inside, to run on the iron; or use ½ inch half-round iron, with wheels concave to fit the iron. There should be a roller 1 inch in diameter raised above the end bar, for rolling, until it takes the trucks. Boot: 32 inches wide. Axles: 1⅜ inches. Front springs: 40 inches long, 5 plates, 14 inches open. Back springs: 42 inches, 5 plates, (2 inches,) 11 inches open. Hubs: 8½ inches long, 5½ inches diameter, 4 inches front band, 4¾ inches back band. Spokes: 1½ inches. Tire: 1⅜ inches by ½ inch. Track: 5 feet. Wheels: 3 feet 8 inches, and 4 feet 2 inches.

Trimming: black cloth, silver fringe.

Painting: black.

HALF-TOP COUPE PHÆTON.

Plate No. 6.—In selecting designs for the Journal, the first inquiry in our minds is, is it *practical*? will it be likely to be useful to any considerable portion of our readers? We do not claim to be the Alpha and Omega of fashion plates, but we do claim that those we present will bear favorable comparison with any published in this or any other country. This kind of carriage we seldom see in country places, but in large cities they are all the rage. Our artist has given us in this design some new points materially changing the general appearnce, giving it, instead of the Victoria, the coupe style, which will doubtless be received with satisfaction by those building this kind of work.

Dimensions: width of body, over all, 38 inches, 2-inch turn-under; side bevel of seats take 3 feet 10 inches bows. Body: paneled. Doors: cut through to shut against the rocker. Mouldings: chamfered. Panel: front of coupe pillar, falling back, showing a ¾-inch depth. Hubs: 7 inches long, 4⅝ inches diameter, 3¼ inches front band, 3⅞ inches back band. Spokes: 1¼ inches. Tire: 1 by ¼ inch Axles: 1⅛ inches. Springs: 37 inches long, 4 plates, 1½ inches, 11-inch open. Track: 5 feet. Wheels: 3 feet 4 inches and 4 feet. Trimming: blue cloth.

Painting: Seats and panels, painted plum color—(mixed of purple lake and black.) Belt, Bismark, (mixed of burnt sienna and yellow.) Seat skirts, edged with a fine line of pea green. Gearing, Bismarck, same as the belt on body, striped ⅜ line of ultramarine blue, centred with a sixteenth line of gold, and edged with a very fine line of pea green.

FOUR-PASSENGER ROCKAWAY.

Plate No. 7.—Considerable objection is made to publications of this kind by country carriage makers, because the fashion plates are not adapted to their use. We confess, in this respect, we have been much in fault, but will consider their claims more fully in the future. This design is well adapted for any section, and will be very acceptable in cities as well as the country; in fact, we seldom see a carriage that comes so near our idea of a pleasant, light, family carriage, and we consider this design alone, worth to the manufacturer, the price of our yearly subscription.

Dimensions: width of body, 3 feet 4 inches on the seat, to be made solid sides, with 1½ inches turn-under. Mouldings: chamfered. Hubs: 6½ inches long, 4⅜ inches diameter, 3⅛ inches front band, 3⅝ inches back band, 1⅛ inch spokes. Tire: 1 inch by ¼ inch. Axles: 1⅛ inches Track: 5 feet. Wheels: 3 feet 6 inches, and 4 feet. Back spring: 38 inches long, 4 plates, (1½ inches,) 9½ inches open. Front spring: 37 inches long, 4 plates, (of lighter steel,) 9 inches open.

Painting: Back seat, imitation of cane work. Panels, painted lake. Mouldings, striped gold. Gearing, black, striped with heavy line of lake, centred with fine line of cremnitz white, and edged with fine lines of gold or bronze.

Correspondence.

☞ We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.

For the Coach-Makers' International Journal.

PAINTING FLOWERS IN MINIATURE.

BY J. H. T.

Continued from page 7.

Iris.—In painting is done as follows: the Persian or Indian iris is done by coloring the innermost leaves with white, and shading them with blue and green mixed together, leaving a small white separation in the middle of each leaf. As to the outward leaves, you must in the same part lay on a lay of masticot, and shade it with brown and orpiment, making small, deep and longish spots, dots, or spots at some small distance from each other; at the upper side of all the leaves, and at the end, make large spots of dark lake for some, and of dark blue for others, but very deep. The rest and the outside of the leaves must be of the sea sort and masticot, very pale, and shaded with dark green.

Another sort of iris is laid on with purple and white, mixed up with a little more carmine than ultramarine, and for the shades, but especially for the middle leaves, diminish the quantity of white, and, on the contrary, let the ultramarine overpower the carmine; and with this color express veins, leaving a small yellow nervure on the inside in the middle of the leaves.

Other irises, again, have this nervure on the first leaves, whose end only is bluer than the rest. Others, again, are shaded and finished with a redder purple, and have also a nervure in the middle of the leaves without, which is to be shaded with indigo; the nervure itself is white. Some of them, again, are yellow, and are done with a lay of orpiment and masticot, shaded brown, with veins of bistre on the upper side of the leaf. The greens of them all must be of the sea sort or color, mixed with a little masticot for the stems and stalks, and shaded with green.

Larkspur, or *heel*, is of several colors and striped; the most common are, purple, gridelin, and red, which you may know how to paint by the directions for other flowers of the same color.

Lily.—To paint, cover it with white, and shade with black and white; do the seeds with orpiment and ochre, and the green of the leaves and stalks with verditer, shaded with iris green.

The Many flowered Lily.—For the first color use orange; then vermilion, and in the strongest shades carmine, and finish with the same in strokes, which correspond with the turn of the leaf. Heighten the lights with vermilion and white, and imitate the seeds with vermilion and carmine. Let the green be done with verditer, shaded with iris green.

The Day Lily.—There are three sorts: 1. Gridelin, a little reddish; 2. The gridelin, very pale; 3. The white.

For the first lay on lake and white, and finish with a deeper mixture, with a little black added to it to sadden it, especially for the deepest places.

For the second lay on white, mixed with a very little lake and vermilion, so that the two last do hardly appear; then shade with black and a little lake, taking great care to make the heart of the leaves next the stalk redder, which, as well as the seed, must be of the same color, especially toward the top, and lower, a little greener. Let the stalk of the seed be done with masticot, shaded with green.

The other flowers of this sort are done with white alone, and shaded with black and white. The stalks of these last, and the green of them all, must be of the sea sort, shaded with iris green.

Marigold.—First lay on masticot; upon that yellow and orange; in shading add a little vermilion. To finish add a little carmine and ochre.

The French Marigold.—First pale yellow, second touching bordering on orange; then stone ochre, mixed with orange, and finish with last color but lightly, and use a little carmine for the deeper shades.

The African Marigold.—First lay on light orange; shade with same and carmine, and a very little umber; but make an edging of orange about the leaves, very bright in the lights, and darker in the shades; shade the seed with bistre. Let the green of both the French and African be verditer, shaded with iris green.

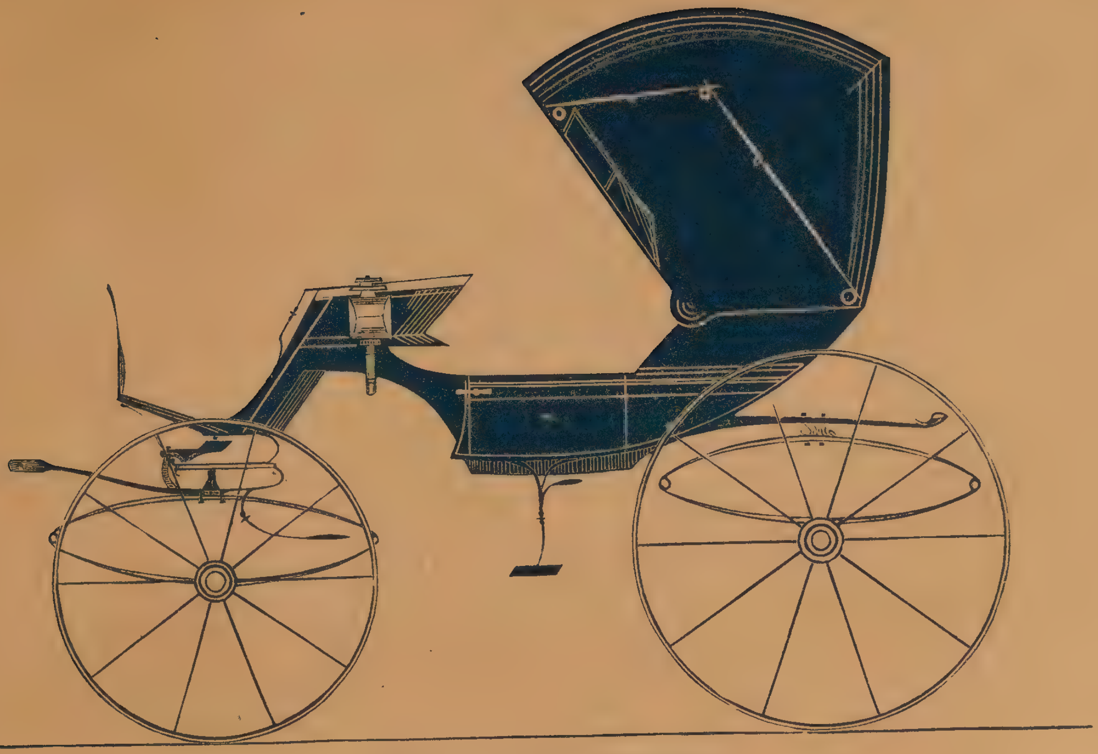
Narcissus.—For all the flowers of the yellow sort, about the same as French marigold, adding a little more umber; but the cup or bell in the middle are to be excepted, which are to be done with yellow, yellow ochre, and edged with vermilion and carmine.

As for the white narcissus, cover them with white, and shade with black and white, except the cup or bell, which do with yellow and orange. Let the green be a sap green, shaded brightly.

Peony.—Let the first lay be of Indian lake and white of a pretty good body, and then shade with a lesser quantity of white, which, however, must be quite disused in the deeper places. When this has been done, finish with strokes of the same color, charging it strongly in the darker shade, heightening the lights and edges of the brightest leaves with white and a little lake. You must also express small veins, like the strokes of hatching, but they must appear more.

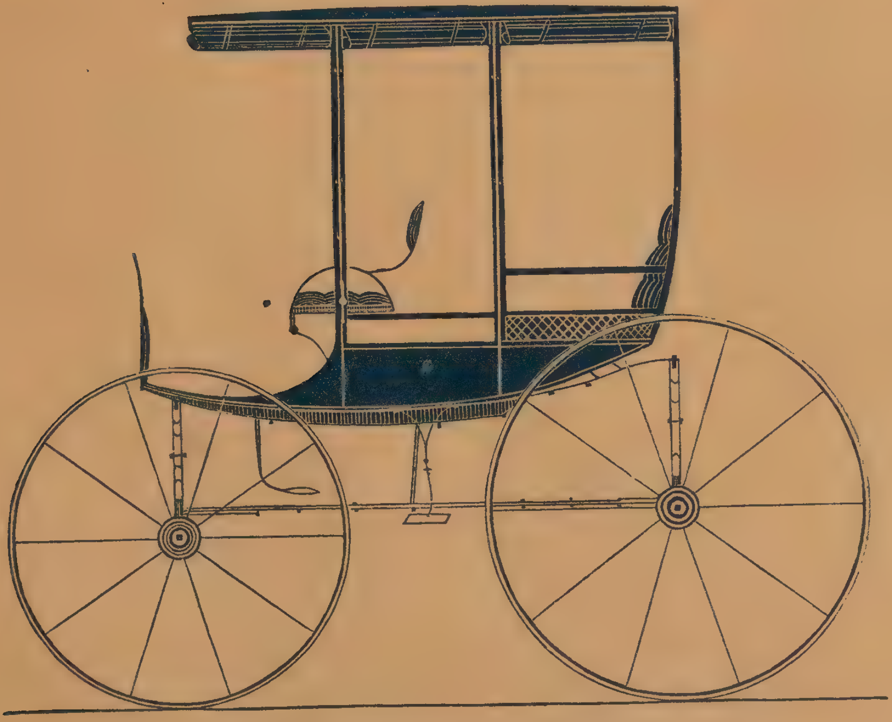
Ranunculus.—Of this flower there are many sorts, the finest of which are reddish and orange-colored. For the first of these use vermilion, with a very small quantity of orange; add carmine to shade with, and finish with this last color and a little umber. For others use Indian lake instead of carmine, especially at the heart. The orange color may be imitated with yellow and yellow ochre; finished with vermilion and a little carmine, leaving some yellow stripes or spots. The green of the stalks may be done with verditer and masticot, to which must be added green for shading. The leaves must be of a deeper green.

Roses.—In painting these, draw the red rose with a fine pencil in carmine. Let your first lay be a very pale mixture of carmine and white, then lay in the shades with same color, but less white, and at last use carmine alone; but it must be very thin at first, adding, however, to the body of it more and more, as the piece advances, and that the shades grow darker; and this is to be done with broad, bold strokes. To conclude, you finish the same color with fine strokes, which must be turned like the turn of the leaves of the rose, scumbling the whole, and touching up the strongest lights and the edges of the brightest leaves with white and a little carmine. You



HALF-TOP COUPE PHÆTON.

Plate No 6.—Half-inch Scale.—Explanation on Page 20.



FOUR-PASSENGER ROCKAWAY.

Plate No. 7.—Half-inch Scale.—Explanation on Page 20.

must always make the heart of the rose and the shady side of the same darker than the rest, and use a little blue in shading the first leaves, especially when your roses are full blown, to make them appear a little fading. The seed is done with yellow, ochre, and a little green to shade with.

Your streaked roses must be paler than the other, that the streaks may be more conspicuous, which must be done with carmine, somewhat deeper in the shades, and very bright in the lights, hatching continually with fine strokes.

For white roses, lay on white, and proceed and finish as in the example of red roses, but with black and white, and a little yellow ochre, and make the seed somewhat yellower than before.

For yellow roses, lay on masticot, and shade yellow, yellow ochre and brown ochre, heightening the lights with masticot and white.

The stalks, the leaves and the buds of all sorts of roses must be laid in with verditer, mixed with masticot, and Sienna shading with bright green, with less of the other colors when the shades are deep; the wrong side of the leaves must be bluer than the other, making the veins or ribs of that side lighter than the ground, and those of the right side deeper.

The prickles upon the stalks, and the buds of the roses, are made with slight touches of carmine in all directions, and those on the stem of the tree; the larger branches are struck in with verditer and carmine, and shaded with carmine and black, making also the bottom of the stems and stalks more reddish than the top; that is, you must mix green with carmine, and lampblack to shade with.

The Pass Rose.—This is to be done the same way as the French marigold, and the green of the leaves the same, but the veins must be of a deeper green.

TO BE CONTINUED.

For the Coach-Makers' International Journal.

ASTOUNDING NEWS.

Agitate the clappers of all the bells throughout the length and breadth of this glorious Yankee nation. Let the shrill-mouthed steam whistles in countless numbers screech out at the utmost compass of their voices the most unearthly and discordant notes. Plant huge cannon on every hill top, and by means of the electric telegraph let them all be fired at the same moment. Build a whispering gallery over the falls of Niagara, and conduct its roar by the use of huge rubber hose to some central point in the country to mingle with and increase the terrible uproar. Let lions be imported from the jungles of Africa, and landed hungry on the appointed bedlam day. Let the Bengal tiger and the hyena form a quartette with the owl and bittern. Let all the fowls of the air contribute in concert their shrillest notes; let the insect creation fret out their monotonous ear-tormenting creakings; let the Fire King beneath us rock the solid earth in his agony, and vomit out the contents of his foul stomach with noise and glare perfectly horrifying. Let the thunder answer to thunder in the vaulted space above us, and the vivid lightning flash its zig-zag terrors in the midst of the people. Let unnamed comets rush into full view in the heavens, and strike terror to the hearts of the masses. Let the meteoric shower not disappoint us this time. Now, all together, sound; nor let the horrid din subside until all the inhabitants of this broad land shall have been aroused and compelled to give attention to the fact, that a *certain publisher of Egyptian and Assyrian carriages has got hold of the tail of the Coach-Makers' I. U., and will doubtless consume the remainder of the nineteenth century in his description of it.* MUMMY.

For the Coach-Makers' International Journal.

CASTLE GARDEN IN TRIMMING SHOP.

NO. 3.—THE REMEDY.

Continued from page 6.

The remedy for all this is very simple, and consists in entertaining at least a spirit of justice in your dealings with those employed by you. Give them at least a chance to make a living; do not, because you happen to be an employer, think that workingmen belong to you; do not snatch the bread from the mouths of those who labor for you and help to make you rich, by any longer continuing this "sweat system." Now we have no objection to piece-work, if properly carried out under certain restrictions, some of which are that the employer shall not allow incompetent hands and boys, and interlopers from every class and grade of workmen, to be taken into the shop and palmed off as carriage-makers, just for the reason that they work for little or nothing, to the injury alike of boss and workmen, to the injury of the business and to the detriment of the trade generally, by filling the places of good boys, who would be willing to serve a regular apprenticeship, and who would, by this means, be in time good workmen, and would fill the gaps in the ranks of the finished mechanics caused by death, &c., and thus keep up the standard of the trade; while the present "sweat system" is rapidly and surely reducing the standard, is rapidly driving the few good workmen who are now in the business from it, is rapidly placing, driving, forcing the trimming shop out of existence; and so speedily is this being done that in five years from now a good trimmer, who has learned his business in New York, will, indeed, be a rarity, and some of the employers who are, perhaps, to-day practising this "sweating" will curse the day they tried it, and this can be proven by facts.

For in looking back a few years, I can well remember how I felt for the fate of several good industrious apprentices which passed under my notice; one of whom, after serving five years, the last three years under the "sweat system," was, and is to-day, unable to hold any job where he would be called on to finish a piece of work complete, and was, when his time as an apprentice had been completed, told that "there was no more work for him" unless he continued to work on at apprentice pay, for that was all that was paid to the "Castle Gardenites" around him, and he, after five years of faithful service, was coolly told he must enter the field in competition against them. He left. He could not hold another job, for the reason that he knew only a piece of his business, and other bosses did not want that piece which he knew—consequence, he had to quit the business, forced clean out of it. He is now, to my knowledge, a useless member of society.

How different it might have been had he been honestly educated to his chosen profession; he would have gone out to look up a job with a certain amount of courage, born of confidence in what he knew; he would have taken a pride in improving his trade and himself, and to-day, instead of cursing the trade at which he wasted five valuable years of his life, he would have been proud of it, and, to-day, instead of cursing the "sweater," who has blighted his future, he would have blessed him as his benefactor, and would have thought of him with gratitude, as the man who gave him a certain means of earning a good living, and, to-day, instead of thinking with bitter, biting thought, of his employer as the prime cause of his wretchedness, he would have looked on him as his friend and helper; he would look back on the five years given to his service as time well invested and profitably laid out, and to-day he would have been a benefit to society instead of being useless to it, and to-day his labor would have helped to advance the interests of his class, where his forced and worse than discouraging idleness helps to draw down those around him.

And this is but one of a number of cases I have been forced to notice. Now, I am not called to notice them, for the "sweat shops" have no apprentices, apprentices don't pay. "Castle Garden" and "sweat-shop" botches have replaced them: and to the employer there is no necessity for all this, he can get his work done by *mechanics* just as cheap as he can now get it botched by interlopers. What he might have to pay as wages to mechanics above that paid to interlopers, now, passes, instead, to the pocket of the "sweater," and is no profit to the boss.

As I said before, I am not opposed to piece-work, or even to "sweat work," provided that this rule be adopted by the bosses. Let them insist on having *mechanics* hired to do the work, and if boys must be employed let it be as regular apprentices, and the boss should also make it his business to keep shoemakers, tailors, boot fitters, mattress makers, bag makers and bird cage makers, from spoiling his work and our trade.

And now, brother trimmers, this is my last letter to you, at least for some time. I have attempted to show the difficulties which are now in your way, and which prevent you from making a living, and I have shown you how it can be remedied. My path will, henceforth, be a different one from yours; I will have to devote myself to other and I trust more profitable pursuits; in a few days I go to Germany, to the place which was the home of my fathers, and there I will, possibly, remain for some years. But remember this, if this "sweat system" is not checked you will be starved, and the results will recoil fearfully on the pockets of those employers who will allow it to be continued. Believing this to be true, believe me yours, truly,

B. ILINOVER.

For the Coach-Makers' International Journal.

FOSSIL GUMS OR COPALS.

BY PROF. W. D. GUNNING.

Man is an heir, and lives on the garnered wealth of ages. A weed drinks in the dew and the light, and gathers its life from the passing hour. Nature may support, with her own daily toil, every other child of her love; but here is one with such infinite needs that he demands for his dower all the wealth she has stored away through cycles of toil. The beams which light the world to-day are not enough for him. The sunbeam, which rained on the earth a million years ago, dropped into a weed, was wrought into coal, and now it comes up from the dark mine to light a city or impel a steamship. Man lives on the *capital* which nature has treasured up for his use.

You sit in your parlor some wintry night. The coal burning in the grate, the flame from the lamp or gas jet you have learned are gifts of some primeval age. Turn to the piano. Its keys *may* have been made of ivory taken from an elephant of living species, but the chances are that the tusk was worn long ago by a wool-clad mammoth, which peopled the plains of Siberia.

And the *copal varnish*—did you ever give a thought to the history of that.

Amber and copal are so entirely of the past that nature, it would seem, has forgotten how to make them. They come down to us from out of the by-gone ages, although no place has been found for them on the page of the geologist. Commerce has made them known to the world; science has at last interpreted their origin.

Every one has seen gum bleeding from a cherry tree. This gum is a hydro-carbon, inodorous and soluble in water. Imagine the gum, hard as the wood that bleeds it, soluble only in alcohol, and that only when oxydized, and you have amber or copal. In some olden time, trees long extinct—the *pinus succinifer*—were standing on the shores of the Baltic. Another species, with a more formidable name—the *aeliocorpus copalifer*—was growing over the desert of Africa and in South America. If now we approach the Baltic, and dig down to the old tree-bearing soil, we find clumps of amber gum bled from the *succinifer*. Specimens are found now and then on our Continent, at Cape Sable and Gay Head. Gum from the *copalifer* is called copal. Copal does not differ essentially from amber. It is more abundant and more accessible. It is imported by Messrs. Valentine & Co., of Boston, and at their works in Cambridge, amid fumes of every noxious odor, it finds its way into varnishes.

This is the end. The beginning was far back in the golden age of Africa, before the wind and the sand had made a desolation of her great plain. How impenetrable the gloom and mystery which veil this land of the sun! Here is a desert, parched and blasted, the same to-day as when the caravans tracked it with the stars for chart and compass, in the days of the Pharaohs. Men have thought of it as a primal blight, a brand of some great curse on the new-created world. And yet that plain, so desolate now, was covered once with a majestic forest. The trees have perished, and their sap alone remains to tell that they were. Under a burning sun these trees were bleeding gum; insects came to sip it, lit, mired; the nectar flowed around them and entombed them; the trees perished, but time has wrought their blood into gems, and here are the insects to-day embalmed in their crystal tombs forever! A hundred thousand of deaths could not disturb even the dust upon their wings.

We all remember how our fathers used to puzzle over the insect in amber. The amber itself was a mystery, and then the insect—how in the name of wonder did it ever get there? Poets rhymed about it, and everybody wondered. The puzzle was something like the apple dumpling to the English king, whose royal brains could never understand how the apple got inside. We no longer wonder how the insect got into the amber or copal, but how long it has been there. Negroes find the copal down even eighty feet in the desert sand. We infer that in places the soil from which the copal tree grew was buried under eighty feet of sand and clay. We have no data by which we can fix the time demanded for such a change, but we know enough to assure us that it must be reckoned in thousands of years. The revolutions of nature, from forest to desert, are never achieved in a day.

In general the greatness of a change is a measure of the time. In general, we say, Where man comes in as a disturbing force, desolation or abundance follows quickly in his path. The plains of Babylonia, so fertile in the days of the great Babylon; the borders of Lake Galilee, so beautiful when the Saviour of men was wont to seek them, are now desolate and barren.

The crimes of men "have dried up realms to deserts." Nature has done the same, but she is never a swift architect of ruin. To have wrought the extinction of a race of trees from Africa, and buried the soil which bore them under eighty feet of sand must have required many ages. The fly or moth, which looks as if it had just lit in its crystal coffin, may have been there a hundred thousand years. We are very sure it was there, just as you see it to-day, before there was any man upon the earth.

What time has spared through so many years cannot be trivial. And not the dead alone have the years touched with sentiment, but the embalming gem. A race of trees perished from the earth, and left no wood or bark to tell that they lived, no seed or scion to perpetuate their kind, but their sap, their spirit—a mere aroma which exhaled from their wounds—this remains, a thing of beauty forever, while everything that was gross and earthly has crumbled to dust.

* * *

For the Coach-Makers' International Journal.

PRACTICAL MECHANISM.

BY J. H. T.

Some author has observed that "the due cultivation of practical manual arts has a greater tendency to polish and humanize the most of mankind, than mere speculative science, however refined and sublime it may be." At the first perusal of this, we may not consider it altogether true, but upon a more close and critical examination the veracity of the quotation will become more and more apparent; for although it may be true that a poet, by his lofty imagination and felicity of diction, may be able to captivate the heart and subdue it to a softer feeling for the human race, and enlarge its powers, these writings are perused by comparatively a small portion of the community. Many may write on the beauty of religion and morality, with the "tongue of men or of angels," still but few peruse them with that attention to render service to the mass of mankind. But a cultivation of the practical manual arts, the moment he has invented a piece of mechanism of great utility to man, renders to every person, be his situation what it may, a work which sets every intellect more or less inquiring into its properties and effects; it is a silent monitor of the vast stretch of which the power of thought is capable of attaining, it speaks with a "still small voice" to the idle, the thoughtless, and the dissipated. "See what my fellow-man is capable of doing, and why should I spend my days in sloth and obscurity? My powers of mind are as capable of comprehension as the inventors, and yet I am going to the grave unknown."

Among all the nations of antiquity, civilization and urbanity of manners kept pace in a community with the improvement of the citizens in mechanical and scientific attainments. The invention of the screw, the lever, the telescope, the art of printing, in fact every useful discovery, tended in its practical effect to soften manners, to enlarge the heart, and to render man in the aggregate more happy, elevated and kind to his species.

But, how often we hear mechanics, not the intelligent ones however, denounce the introduction of machinery when first introduced in their trades, and they often oppose them with determined resolution; the propriety of their introduction then becomes a vexed question between employer and the employed, and resort is frequently had to illegal measures for their prohibition, induced perhaps by despair, where large numbers are suddenly thrown out of employ, as is often the case.

We have sometimes seen persons, when they have observed machinery approaching in their trade, attempt to stop it by railing at it through some public paper, or by rising to arrest it violently; such attempts have always failed, as indeed it was reasonable to expect and desire, that they should fail. To hinder such changes, therefore, would be to render great improvements impracticable, and this would be to counteract one of the chief ends for which society was instituted. In communities where persons whose arts and means of subsistence are likely to be affected where machinery is about to be introduced, would do well to bear in mind these four considerations:

1st. That the sympathies of the public cannot be engaged in behalf of those who attempt to retain an inferior mode of labor, upon the ground that they would be injured by a change. Because, in the first place, the public know that *they* will be gainers by the change; and in the second place, they know that the parties who complain of it may, by prudence, escape more than half the trouble which they fear and anticipate.

2d. That the public are quick-sighted enough to discover the real worth of all those predictions of evil, by which the preparations for such a change are attended; and they generally think that the pretended "seers" would see more to the purpose, if, instead of looking back at what they once had to themselves, they would look forward to what they might share with others.

3d. And, what is of still more importance, that by submitting, in time, to the necessity of the change, and endeavoring to modify their practice to suit it, they might, with a comparatively small loss, find places of preferment on the new working ground, and turn their old skill to good account in the new mode of labor.

4th. And finally, that if they cannot change to the new mode of labor, on their own line of work, better, far better, must it be, to go early to another line of work, with a little loss, than to remain grumbling, or rioting on the old line, with a certainty, that they will be left alone there, to consume all their substance, and will then have to go away, attended with poverty and self-reproach.

The subject resolves itself into this shape, whether practical mechanism or the invention of the mechanic shall have full scope in the production of useful and ingenious machinery, or shall be, like the Chinese, restrained from introducing anything unknown to his ancestors five thousand years ago? There appears to be no medium course, and the intelligent man will not be long in deciding which is the proper one.

Mechanics, thinking mechanics, what are you doing to save manual labor in your business? If you are doing but little toward that end, you are rising above the common level of your fellow-beings. The catalogue of illustrious mechanics affords instances of men who are venerated for and immortalized by the labor-saving machines they have produced.

This subject has never, perhaps, been considered so thoroughly as it should be. It strikes me this is a matter for inquiry by every mechanic, which would amply repay the troubles of investigation, that it would be productive of immense utility to mankind, and place the mechanical arts in that position in the world they so richly deserve.

* * *

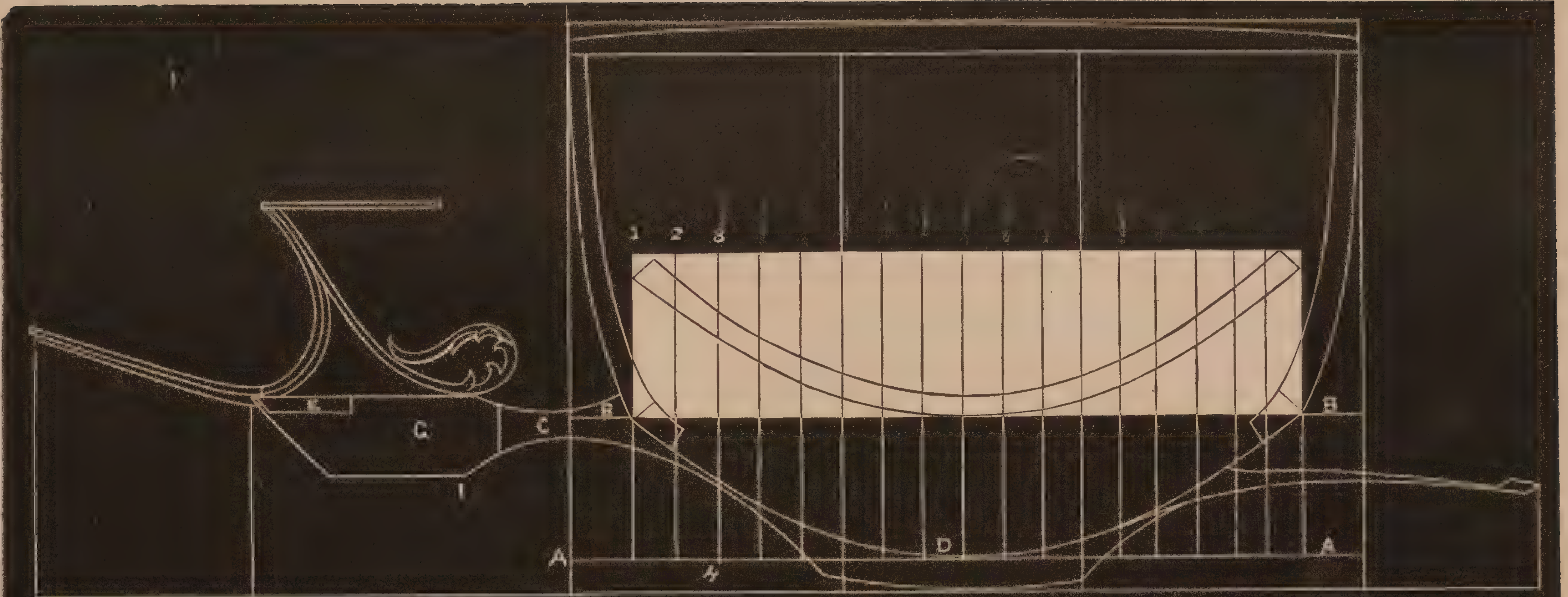
For the Coach-Makers' International Journal.

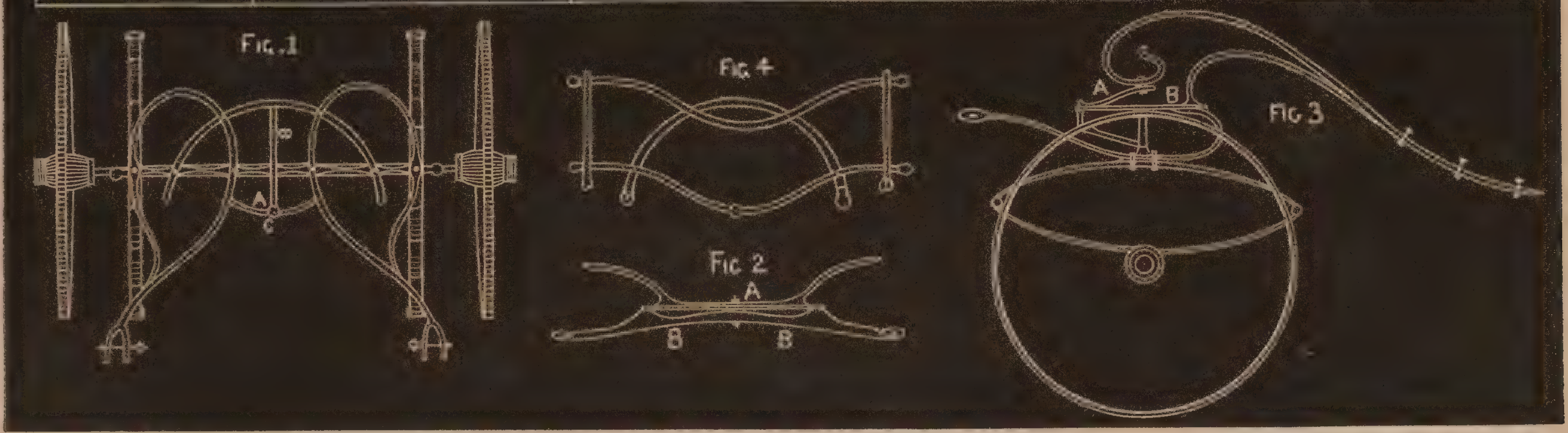
Boston, October, 1868.

Mr. Editor and Fellow Readers:—From month to month I have been reading this Journal, and extracting from its valuable pages many a choice bit of practical instruction. Thus I have become interested in it, have rejoiced in its recent enlargement, and in the evident favor with which it is received, and thus I am now induced to proffer my feeble assistance in its support. I intend, month by month, to try and make time enough to toss in my driblet, as a contributor towards its maintenance.

I shall not confine myself to any system, but shall simply offer to your attention a series of rambling notes and scraps of matter that I gather together amid the hurry and bustle of business life. *Variety* will be the only rule by which I shall be guided.

This want of method, will not, I trust, be displeasing to you; for to my mind it seems highly important that every pamphlet, which is intended for the varied needs and tastes of the public generally, should have that breadth of scope,





Coach Drafting: The Manner of Making Patterns. Three-quarter inch scale. Explained on page 23.

Front Carriage Part on Loops. Half inch scale. Explained on page 23.

which may enable it to satisfy the wants of all, young and old, merry and sober, practical and poetical, and thus gain for it a place not only in the office, but in the *home*. True, carriage interests are its standard, but around that standard cluster all the interests that appertain to man.

Now, that I may perhaps be enabled to interest you the more by so doing, I am going to give you a brief sketch of myself, for I am, as yet, a stranger to you all. Therefore, with many pardons, I beg leave to thus introduce myself. I am a young man, or an old boy, either as you please. The former would be the more polite name, and the latter perhaps the more applicable. My working hours are mostly spent in this noisy and energetic little city of Boston. Now and then I have occasion to wander off into some neighboring community, on a business errand, and am thus enabled to gratify my love of change. Once a year, too, I have a vacation, and to the utmost limits of the short two weeks, I revel in the luxury of travel, and what a delightful pastime travel is! From the bottom of my heart I pity all those poor men whom I see tramping to and fro from house to shop, and shop to house, from January to January, year after year, never looking either to the right or left, and neither knowing nor caring for other scenes. No wonder, if the ideas of such a man become cramped and his soul sour and selfish. Home is truly a little world of itself, and blessed are its many privileges and enjoyments, but blessed, also to me, is an occasional visit to other homes, the little worlds of others. Thus a man's ideas of life may become enlarged, and high souled and generous; thus may he better love his fellow man, better knowing him, and thus may he be able to return to his home, and more fully appreciate the untold blessedness of it.

Thus I have been led to tell you rather at length, concerning my ideas of travel. They may perhaps be considerably influenced by the fact that I have not yet settled down in a home of my own, with loving wife and children to anchor me in it. I am still unmarried, a fact that I can only explain, by saying that I have never yet come across anybody whom I sufficiently loved, and who at the same time sufficiently fancied me. This, I say, may be one reason why I am such a tramper.

Now, in these transient strolls of mine, I keep my eyes open and see all I can, and after this, when anything particularly interesting or instructive comes before my notice, I intend to tell you about it. When I visit an industrial establishment of any kind, and see anything that excites my curiosity, and am thereby induced to make special examination into it, I shall give you the benefit of such examination.

And now, having introduced myself to you, and made you acquainted with my plans, I bid you "good-bye" until next month, and sign myself, your earnest co-worker, G. W. W. H.

THE MOST REMARKABLE TABLE IN THE WORLD.—The *Evenment Illustre*, of Paris, gives the following details of the silver table ordered for the Sultan. The designs are composed from the ideas and advice of M. Agop, sent by the Sultan to Paris for that purpose, and are splendid. The middle or centre piece represents a Moorish palace two feet six inches high; there are two end pieces, representing fountains, two triumphal arches, and two end pieces for flowers, all to be executed in the Alhambra style, in massive silver. The length of the table will be about one hundred and forty-eight feet by about sixteen feet broad. Besides the actual cost of the table, a sum of 2,000,000 francs is destined for the purchase of linen, glassware, accompanying furniture, &c. Such a magnificent *tout ensemble* has probably never before been manufactured.

Pencil, Rule & Square.

D. BOARD, EDITOR.

MANNER OF MAKING PATTERNS.

PART SECOND.

BY A PRACTICAL CARRIAGE ARCHITECT.

(See front of Journal.)

We give the manner of making patterns. You will perceive we have taken the body from the carriage, and give the outlines of the side elevation of the body on the draft board, to make the patterns for the body so that they harmonize in shape with the lines drawn. Many different modes of accomplishing this important task have been devised, but we have never yet seen any rule so simple and complete.

You will proceed to draw the line B B, being the ends of the bottom side; straighten one edge of your panel, now lay it on the draft board, with the straightened edge on line B B, as the white space represents the panel in the diagram that the pattern is to be made from.

Having laid the panel in its proper place, square the perpendicular lines Nos. 1, 2 and 3 from the base line A A. Having drawn the perpendicular lines as described and illustrated, next take your large dividers, place one point on base line A, at perpendicular line No. 1. The other point you place to line B, where line B crosses No. 1. Having this space with your dividers take the point from A, and prick it on the panel on line No. 1. You will proceed in like manner with Nos. 2 and 3, and with all the perpendicular lines the full length of the bottom side.

You now proceed to make the sweep according to the prick marks. Then gauge 1¾ inches for the width of your pattern. All patterns are made in the same manner, excepting the standing pillar, roof-rail and curve patterns, which will be explained in the next issue.

Fig. C, the neck pattern, to extend from Fig. 1 to Fig. H, to form the concave boot. Fig. G, this pattern extends back to inside of the front pillar. Fig. E, made as represented in the diagram.

P. S.—A typographical error occurred in the last number, where it says: "From this point measure 45 inches; draw line E, being the height of the body," which should have read "42 inches."

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

Front Running Part on Loops for a Park Phæton.

(See front of JOURNAL.)

As a novelty in carriage parts, we have selected one that has only one piece made of wood, viz: the spring bar; all the rest is made by the blacksmith, and therefore of interest for all that have a call for iron architecture. It is light but strong, and if properly executed looks stylish. It is designed for a light phæton, or cabriolet, for two seats.

Fig. 1.—*Top view.*—In the place of a bent furchell, we have a similar stay, as represented in our last number, although the manner of connecting these stays with the spring bar is different. We also do away with the puncheons. The head block A is forged of the best quality of iron, ⅞ by 1 inch, and has ¼ of an inch added at the socket for the king bolt. It is finished with a flat surface at the top and bottom of scant ½ inch, and the sides rounded to. A bridge B is welded to it, starting at the socket, and resting on the top fifth wheel, supporting the middle loop, which steadies the bearing at the back end of the carriage. The stays for the reception of the shaft have a cross piece at C welded between, forming the lower socket for the king bolt. The dimensions of this cross piece are 1¼ inch at the start from the stays, by ⅞ thick.

Fig. 2.—*Front elevation.*—Showing the shape of spring bar, ¾ by ⅞ inch, being plated at the bottom ½ inch. B B shows where the stay iron is bolted to the wooden bar. The way the iron or horn bar A is raised at each side is also shown. For measuring, use the ½-inch scale.

Fig. 3.—*Side elevation.*—Represents wheel, springs and loops, the bend of the shaft stay, and the manner in which the centre loop and bridge B is connected; it forms one solid piece of the head block, or horn bar, and the centre loop, playing square on the spring.

Fig. 4.—*Top view.*

Principle of a Double-folding Coach Step.

Fig. 1.—*Front view.*—Showing the thickness of the slats, their sockets, and the three turning points A B C. This view is only drawn to the dotted centre line, the points A B C being corresponding.

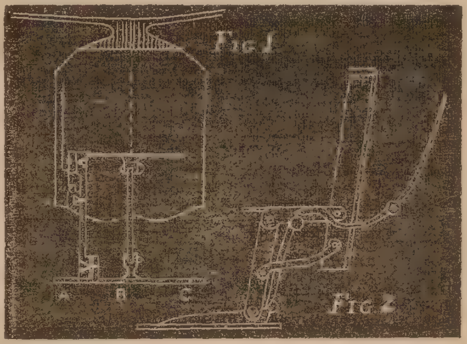


Fig. 2.—*Side view.*—Representing the slanting position of the frame, the width of and length of the step bars, and the lever operated by the opening or shutting of the door. Scale: 1 inch the foot.

WELDING—NATURE AND MEANS OF THE PROCESS.

Welding, as usually considered, is the uniting of two pieces of iron or steel by the combined means of heating and compression, or by either of these alone. In the welding of wrought iron the two portions to be united are brought to a white or welding heat—a state of incipient fusion—in a furnace or forge, and then united by being brought in contact, and subjected to percussion by the hammer, or to compression by rollers or dies. This is the usual style of welding.

Welding, by heating alone, is used in repairing broken castings of iron, and also for uniting cast steel and cast iron, as the faces of anvils united to a cast-iron block, or the edges of shears and scissors to the iron stock. It is performed, in the first instance, by placing the mass of cast-iron in a mold with a cavity formed by the broken piece, used as a pattern, and then replaced, a free gate being made from the point of fracture or intended union. The melted iron is poured in and allowed to flow through, until, in the judgment of the operator, the two surfaces are brought to such a state of fusion as will suffice to unite the parts when the gate is closed, and the iron allowed to rise in the sprew. The method of uniting cast-steel and cast-iron is similar, and the results are the same.

Welding, by compression alone, is, so far as we know, the result of accident, although why it might not be utilized we cannot see. It may be witnessed sometimes in the case of turbine water wheels, or other heavy machinery supported on upright shafts, the weight of which is sustained by two or more washers of steel or iron. The weight, combined with the friction, unites the disks so firmly that we have seen cases where they could not be separated by any ordinary mechanical means.

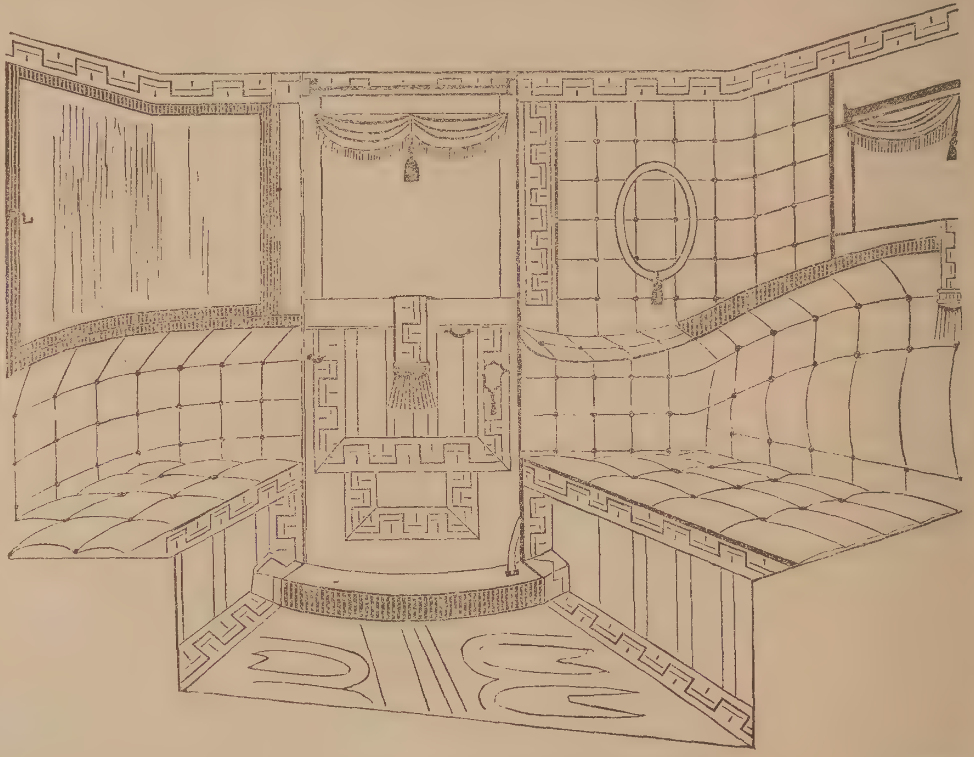
The object of heating is to soften the substance, or rather to separate its particles, thus allowing room for the reception of the particles of the other piece to be joined. In fact, it is a partial fusion of the metals, which forms a union of their particles in the same way as in melting and casting, except in the former case compression is necessary to complete the work. Although we speak of percussion, rolling, and pressing, as comprehended under the general term of compression, one method may have a great advantage over another under certain circumstances. For instance, we examined, the other day, a steel bit for a horse's mouth, having a large steel ring at each end made of quarter inch steel wire. It was impossible to see where these rings were welded, although the weld was only a but or jump weld—the parts in contact being only the cross section or diameter of the wire—and the only means of hiding the joint was the finish received by the rattle box or tumbling barrel. The method used was to coil the wire on a shaft of suitable size, as in winding a close coiled spring, and then sawing longitudinally across, separating each coil into a ring. This was passed through the hole in the head of the bit, and the ends of the ring heated to a low red only. Then the ring and bit head were laid into a recess in the matrix or stationary die of a press, which was slightly smaller in diameter than the unfinished ring, and a corresponding die was brought down upon the ring, not dropped, but with a gradual squeeze. With only this slight heat, but with the compression, extending around and exerting its force on every portion of the ring, the result was perfection itself. This style of work is done by some concern in New Haven, Conn., the name of which has escaped our recollection. It would seem that this process might be economically applied to the manufacture of chains, elegant in appearance and of unusual strength. It appears that the union of the parts in a weld is effected more by the compression of the parts than by the heating. Blacksmiths understand this when they require the blows of two or more sledges to make a weld. It may be mentioned that clean surfaces are necessary, as the least amount of oxidation impairs the efficiency of the weld. The use of a flux, as borax or sand, &c., is mainly to protect the parts from the oxygen of the atmosphere.—*Scientific Amer.*

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

Inside View of Round-front Clarence.

SHOWING ONE-HALF OF BACK, ONE SIDE, ALSO ONE-HALF OF FRONT.



In accordance with my promise last month, I offer this, showing the most general style of finishing the inside of this class of carriages. There are some new points in the style, especially in the finish of the arm piece with a roll continued around the top of the back and in finishing the top of back, with the folds flared outward from the centre. The doors are sometimes trimmed a little different; for example, the door falls are rounded or six sided at the bottom, as also the dropping door pocket to match. Covered buttons are most in favor; tufts are seldom seen now. Cushion top made up on a frame, square top. The pattern of lace most in favor is something like that represented in the drawing, and called the walls of Troy pattern.

Next month I will give you something new in heavy work, and hope this drawing may be of some benefit in showing the present style in coach work.

Mr. Editor.—Please insert the following in the Journal for the benefit of your readers.

An Improvement in the End Finish of Drop Backs for Shifting-Top Work.—The improvement claimed is that in the finish of the ends of the back, no stitches show outside, and all appearance of clumsiness is obviated. Sew your cord on the end of the back, either before or after the back is made up, leaving the end roll open, of course, so that you can blind sew the back cover. Then proceed to sew in your cloth, and your back is neatly finished.

New Box Loop.—Cut out a pattern of wood on which to form your loops; make it, say 2½ inches long and ⅝ of an inch wide, ¼ of an inch thick, tapered down to ⅛ of an inch at one end. On this pattern, you can make the loops either 2 inches, or 1¾ inches long, as you may desire, which will leave half an inch of projecting wood by which you can remove the pattern. Take a piece of trimming leather, say six inches long and three inches wide, double it, and paste the flesh sides together and form it over the pattern. When dry, they will keep their shape; water will not affect them. Being pliable they give with the stay, and are considered by those who have used them far preferable to the tin loop.

A. D. C.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

The Principles of Coloring in Painting.

Continued from page 9.

White and black represent light and shade. By adding white to any color we produce various light tones of that color; by adding black to any color we produce various dark tones. All light colors bring forward, according to their strength, every part of the pattern being painted, while dark colors are employed to represent the more remote parts; in other words, those parts of the object, which reflect the most light, would be painted in light tones, and the more remote parts of a deeper or darker hue. Place before you a cylinder of wood, painted, say red, and varnished. A white stripe will be seen at the highest point on the surface, running the length of the cylinder parallel to its axis. The more remote parts will appear of different shades of red, as less light is reflected. To paint the object named on a plain surface, so as to appear in relief, it would be necessary to mix three or four hues of red, placing the lightest in the centre, the deeper tones to the right and left of the first, and the darkest to the extreme right and left. By drawing a fine line of white through the centre, and a pale reddish tint at each side for the reflected light, always to be seen on circular objects, you will have produced, on a plain surface, the appearance of a cylinder in relief.

It is by light we are enabled to distinguish colors. The light of the sun, or solar light, is white, yet subject to modifications from different states of the atmosphere. The prevailing colors in nature are what are termed cool colors, and are tempered so as to present to the eye nothing injurious. Green, which abounds in almost every natural landscape, and the etherial blue above us, are cool in color. In the woods in summer you may notice a great variety of green, but none are dazzling. The close observer of nature will observe in his rambles that grays are abundant. The trunks and branches of many trees, the dead twigs scattered about over the ground, and also the rocks that jut out here and there partake of this tint. Rich browns are found on the old decaying trunks of fallen timber, and by light and shade among the foliage of the trees may be seen a great variety of olive greens. At this season of the year the forests put on their gayest attire. We will be compelled to admit, too, that Jack Frost has a good eye for color. See the rich yellows, olives, scarlet, crimson and other hues he has spread over the landscape. The lovliest sight is to stand on some rustic bridge, and look forward over a smooth meandering streamlet, where the distant view is inclosed by a heavy growth of timber. The drooping branches kiss the water, and sway gently as if ashamed of their own reflected beauty.

The gray of the morning has its charm, and the golden hues of sunset, dripping at times by the overflow of their own loveliness, are modifications of natural light. The waters reflect the sky and surrounding objects, repeating their colors. Thus we find but little in nature of a glaring cast.

Artificial light, obtained from burning bodies, is generally colored.

At night, by lamp or gas light, we find it difficult to distinguish colors. Green and blue, pale yellow and silver colors, and others are not easily separated, which we will endeavor to explain in our next number.

TO BE CONTINUED.

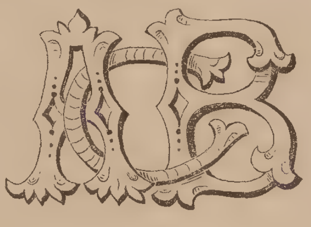
PERMANENT WOOD FILLING.

This article, which is now attracting considerable attention among carriage-makers, and awakening some inquiry from furniture manufacturers, is being put to some severe tests by those who are anxious that it should supersede the use of poisonous *lead*, which is so injurious to the health of the painter.

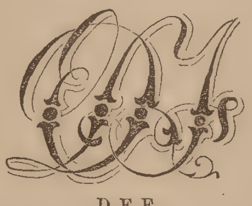
We will give our readers the result of an experiment, which proves that *water* has no effect upon it. We coated a piece of poplar with the "Filling," and, after letting it dry for four days, we then placed it in a pan of water, and let it soak for fifty hours. After drying it off, we found the grain had not been reached by the water, proving that water or dampness cannot penetrate the coating of Permanent Wood Filling.

MONOGRAMS.

We give in this number three monograms, viz.: A B C, D E F, and G H I. We intend to combine the alphabet after this manner, which will secure to the painter all the letters needed in forming monograms. The style of letters will be changed in each number of the JOURNAL. After practicing on the patterns given, you will be prepared to originate according to your own taste. To those who are skilled in the art these studies may be of no benefit, but to those who wish to learn we trust the instructions will be valable. In drawing monograms you are at liberty to proportion the letters in any combination to suit your own taste. You may lengthen, widen or shorten one or more of them, or join two together, as we often see Æ in the word Ætna. The patterns A B C and D E F, are formed on a parallelogram, (or long square,) measuring five by seven-eighths of an inch; or rather, we should say, that each letter is so formed.

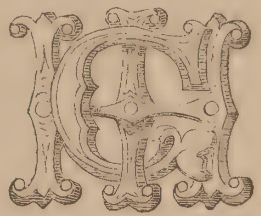


A B C.



D E F.

By cutting out a piece of paper, five by seven-eighths of an inch, and laying it on either of the letters, you will perceive the variation from the right or straight lines. G H I are formed on a square of one inch. Here H is the main letter, because G and I are made subject to it; that is, H was formed on the square mentioned above, and the other letters drawn afterward. The letter H is proportioned so as to give room for the letters G and I to be properly displayed, still keeping the design as compact as possible. In painting a monogram you may use different colors for each letter, avoiding too great a contrast between them, to bring forward the letter you would read first by light colors, and those that come after by retiring colors. White, yellow, orange, &c., are advancing colors; browns, blues, &c., are retiring colors. Warm browns, olives, and blue, purple and greens, of a proper tint, follow yellows and reds into shade. Suppose you wish to paint for practice the pattern G H I. Having secured the outline, distinctly marked on a piece of patent leather, or other material, take burnt umber and vermilion, and mix up three hues, the lightest place on G, the next tone on H, and the darkest on I; when sufficiently dry, separate the letters where they intertwine with a wash of asphaltum, and light G with pure red, H with the color of G, and I with the color of H. Other colors may be used in the same manner. Practice alone will make the eye sensitive to the gradation of colors, tints and shades necessary to produce a pleasing ornament. The above is a very simple set palette, but will, to the new beginner, prove useful in preparing him for more difficult tasks.



G H I.

WEST RANDOLPH, VT.

MR. EDITOR:—I would like to inquire what makes varnish turn white when washed, and if you call such good? The varnish I am using, to let it stand, there will be a scum arise on it, and when a carriage is exposed to the wet will turn white.
W. W. B.

ANSWER.—The cause of varnish turning white when washed, is, we think, the contact of the water with the oil in the varnish. A temporary chemical change takes place, which is removed by the heat of the sun. The practical painter is well aware that if he mixes water with varnish, (which generally happens accidentally,) the water will assume a whitish appearance on the work he may be doing wherever it is spread over the surface. As soon as the water has evaporated, the varnish will be free from streaks, and show its natural color.

Again, take a small quantity of oil, and rub it with the finger on a piece of black leather, or any other material; then dip the finger in water, and rub the oil and water together, and you will perceive that the mixture (if mixture it may be called) will assume a whitish appearance.

The action of water on varnishes, especially the finishing varnishes, causing, when washed, or exposed to wet weather, a white or bluish-white appearance on the surface, is no evidence of an inferior varnish. The English wearing-body varnishes, and the best American imitations of the same, present the appearance spoken of by W. W. B., to a greater degree than the American rubbing varnishes because of their greater elasticity.

HORNELLSVILLE, N. Y., Oct. 16, 1868.

QUESTION FOR P. ALLETTE.—Is there such a color as French gray, and how mixed?

Yours, with respect, G. B. G.

We have the same question asked by W. P. W., of Nyack, N. Y. French gray, so far as we have any knowledge of it, is nothing more than lead color. To make a good color, which would have more purity than the ordinary mixture of black and white lead, use flake or cremnitz white mixed with drop black; a very small quantity of black only is needed, merely enough to turn the white a silvery gray. This mixture will make a cold looking gray. If you wish it richer, use drop ochre, or yellow and red, merely tinging the gray, but not allowing the yellow or red cast to predominate. On ordinary work, we used to mix only drop black and white lead, lead color, which, after being striped up nicely, and finished, passed for French gray. The Frenchified title had considerable to do with its popularity, but it never was liked by many customers. Varnish darkens it somewhat, so that the painter must make calculation for the shade he desires, by taking into account the difference of a tone or two deeper after being varnished.

WEST RICHFIELD, OHIO, Oct. 19, 1868.

How shall I paint the gearing of a carriage so that it will not crack or peel off? If you will answer this soon, you will greatly oblige a

NEW BEGINNER.

ANSWER.—To paint a gearing so that it will not crack or peel off in a reasonable length of time—1st. See to it that the wheels and other wood work is well seasoned, and that at the time you prime there is no water or dampness on the surface, especially of the wheels. Mix the priming coat of keg lead, thinned down with raw linseed oil, and a small quantity of japan sufficient to dry it in about four or five days. Where you have plenty of time, use no japan. Brush the lead well into the grain of the wood, leaving only a thin coat on the surface. (Thin painting wears best.) Be very careful to work the lead well into the wood between the spokes at the hub; also where each spoke joins the felloe. Carelessness at these two points is the just cause of a great deal of complaint; the water having a better chance to lodge and soak in at these places, we generally see the peeling commence at the points named.

Mix the second coat of lead with less oil than the priming, but still sufficient to bind the paint to the metal parts of the gearing (or carriage) which now receive their first coating. Don't paint over any rust or grease. See that the iron work is free from everything that would hinder the proper drying of the lead. Lay on the second coat of lead somewhat heavier than the first, leaving a good body of it on the wood parts, driving it rather thinner on the iron work. Let the job stand forty-eight hours. Now putty up with a firm drying putty; let this stand for two days. Sand-paper putty down with No. 2 sand-paper, (a coarser sand-paper will tear out the putty,) leaving as much lead on the wood as is possible. Dust off, and apply a coat of dead lead, ground out fine. Lay this coat on smoothly, and of a body sufficient to cover the wood perfectly; when dry, sand-paper with No. 1 sand-paper, being careful to not cut through. You may now apply your color.

For all ordinary colors, mix them with one-third oil and two-thirds japan, thin down with turpentine as the progress of painting may require, laying on but one coat a day. Two coats of color, and one of color and varnish, with only enough varnish to admit of hairing the gearing off, is the best mode, we think. After two days, hair or moss off the varnish, and run on (if to be striped) the broad line. Next day lay on a medium heavy coat of rubbing varnish. The gearing should now stand four or five days; then rub down with ground pumice and water, and fine line according to your taste. The following day lay on a heavy coat of English varnish. A gearing so painted, if not abused by the owner, by being left standing, covered with mud and filth for days together, and is properly washed and housed, should remain firm a reasonable length of time.

Poetry.

THE ENGLISH LANGUAGE.

Mine Cot! mine Cot! what language dat!
I cannot English spraken,
For shust so sure I speak him right,
So sure I bees mistaken.

For when I says I vants my beer—
I mean that lager fixin;
Bier means dem ting dat folks ride on
When dey go dead as blixen.

Den say dey "rise" a building,
Dey "raze" down so cline;
"Rays" mean dem ting the sun throws down
Ven it gets up to shine.

"Meat" means dem ting dat coot to eat;
"Meet" also means ting proper;
'Tis only "mete" to measure dese tings
Ven steamboats "mete" the stopper.

Shust de same words means every ting,
It makes no business whether
You spell him dis or t'other way,
Von sounds almost like t'other.

Mine Cot! mine Cot? so sure I "knows"
I cannot English spraken;
For ven I "nose" I speak him right,
Py dam! I gets mistaken.

For the Coach-Makers' International Journal.

SOCIETY.

A FRAGMENT BY GERALD.

Like a stagnant pool, society has become
A place where vilest creatures breed and bloat—
Where greenback toads, buoyed by the scum,
On the upper surface, croaking, float.

Where human leeches on the slimy bottom crawl,
Swollen with blood purloined, or gained in strife;
While labor, burdened with the weight of all,
Sinks to the neck, and struggles there for life.

◆

I WISH I WAS A PRINTER.

I wish I was a printer,
I really do, indeed;
It seems to me that printers
Have everything they need,
(Except money!)

They get the largest and the best
Of everything that grows,
And get free into circuses
And other kind of shows,
(By giving an equivalent.)

The biggest bug will speak to them,
No matter how they dress,
A shabby coat is nothing
If they own a printing press,
(Policy!)

At ladies' fairs they're almost hugged
By pretty girls who know
That they will crack up everything
The ladies have to show,
(Lucky fellows!)

And thus they get a "blow out" free,
At every party feed—
The reason is because they write,
And other people read.
(That's so.)

◆

I MISS THEE!

I miss thee, gentle mother;
How I miss thy kind good-night,
Thy warm kiss on my throbbing brow,
Thy blue eyes' tender light,
Where e'er has been so soft and mild,
A bright star to thy wandering child!

Oft times since I wept good-bye,
How thoughts of thee and home
Waked in my heart a bitter sigh,
Till visions bright would come
Of father, mother, home so dear,
My weary care-worn heart to cheer!

I miss thee, father—all thy love;
And hopefully my heart
Waits for the hour, no more to rove,
We'll meet and never part.
Though joys be few and sorrows many,
Think sometimes of your absent Jennie.

Where the heavy shadows lengthen
O'er the dew-kissed sod,
Then my soul in faith shall strengthen,
And in my prayer to God
Ask him to guide with loving hand
Each darling of our household band.

Selections.

THE PROSPECTS OF CALIFORNIA.

It seems hardly possible that twenty years ago California was comparatively an unknown land, and that since that time not only have hundreds of thousands flocked to it for gold, but that its wealth as an agricultural country should cause it to be full of attraction for even a larger portion of the community. With its excellent climate, the Pacific Railroad constructed across it, and its fertile soil, California is one of the most promising countries in the world. Farmers who went there in the early days of the State, looked forward to gaining enough by toiling in the gold fields to compensate them, and after a few years they hoped to retire with wealth sufficient to repay their exertions. But recently, agricultural labor has proved, in many cases, so much more remunerative, that many find the crops more to be depended upon than the product of the mines, and wheat, barley and corn more valuable than gold. In 1867, for instance, eight millions of bushels of wheat, exported, brought thirteen millions of dollars in cash. There were, besides, seven millions of bushels for home supply. This, with nine million pounds of wool and two million bushels of potatoes, were not a bad yield for a young State like California. The mildness of the winter also renders stock raising easy and profitable. Twenty-five millions of vines show that grape growing is quite as lucrative. The vines are healthy, and the wine makers pay seventy-five cents for a hundred pounds of grapes. From them, in 1867, four million gallons of wine and four hundred thousand gallons of brandy were made, and while there is full demand for all that can be supplied, the use of the vine products of foreign countries is superseded.

The produce of 1853, from mining alone, was sixty-five millions of dollars, while in 1867, only twenty-five millions was the amount of gold yielded; but this falling off has been far more than made up by the increase in agricultural produce. Rice, cotton, tobacco and silk are among the articles the culture of which has commenced, and there is no limit to their production. With a territory seven hundred miles long and two hundred and fifty miles broad, forming a State of about a hundred and sixty thousand square miles, and having three times as much arable land as the whole of Great Britain and Ireland, and nearly as much as the whole territory of France, California is sure to attract a large agricultural population. All kinds of fruit and vegetables can be raised, and from twenty-five to eighty bushels of wheat per acre is the yield of enclosed fields.

The same nine degrees of latitude which, on the Atlantic shore, stretch from Plymouth Rock to Charleston, are in Calfornia open to the emigrant, and in many places, for a small cost, the land may be his forever. In the southern counties roses bloom in the valleys every month in the year; grapes, oranges, figs and olives grow in luxuriance, and all kinds of agricultural products are easily raised. There is no injurious competition, but room enough for a population of millions of inhabitants without crowding, and the difficulty in the country districts is to obtain neighbors sufficiently near to make companions of. In a generation or two, California will be looked upon as the garden of the world, and no limit to her prosperity can be conceived. Already her manufactures are estimated at thirty millions of dollars per annum, and their amount is constantly increasing.

This new State is the growth of the present age, and of it we have reason to be proud. In making rapid and substantial progress, and securing a swift and easy transition from a mere collection of roving adventurers to an orderly and permanent population, the people of California have done wonders. They may well be pardoned for feeling pride in what they have already accomplished, and for looking forward to a bright future.—*Philadelphia Ledger*.

TREATMENT OF APPRENTICES BY "OLD HANDS."

The love of power and its exercise, the assumption of superiority in position and knowledge, tend to make tyrants of all men. But nowhere is the exercise of this disposition more unpleasantly seen and more unpleasantly experienced than in the shop. It is very hard for the boy, perhaps just from school, where his labor was merely of the mind, and where, perhaps, he had the sympathy as well as the assistance of a judicious teacher in his tasks, to come as an apprentice in the shop, and accustom his untried hands to the hard substance of metals and woods, without his being compelled to bear the harder taunts, jokes, and witticisms of his seniors. Yet these he must, not unfrequently, bear. Instead of trying to make the apprentice's course plain, smooth, and pleasant, it is too often the case that the journeymen, otherwise sensible and considerate, encourage if they do not inaugurate a system of petty annoyances and petty tyranny, as disgraceful to their character as men as it is confusing and cruel to the victim. There is nothing manly in this. If it is designed to impress the novitiate with the superiority of the attainments of his tormentors, that end could be gained as readily by quietly pointing out his failures, and instructing him in his duties.

This victimizing of apprentices is a relic of barbarism, imported here from the old countries, England especially, where the lower class of workers seem to have the idea that brutality is the only proof they can give of their superiority over their inferiors. We have seen many cruel experiments tried by this class of men who disgrace their nature and calling. Imposing upon ignorance, betraying confidence, and falsely swindling the trust given them, they take a demoniac pleasure in fooling, bothering, and annoying those they should be proud to instruct and assist.

To a lesser extent this course is pursued in almost every shop in the country. Where this spirit dare not be manifested openly, in the way of practical miscalled jokes, it is in either giving false information, or a refusal to give any; in a neglect of the common shop courtesies, and a supercilious manner and pretentious bearing. A miserably mean jealousy, born of a low spirit, is the source of all this nonsense. It does not pay. It impairs the confidence the apprentice should feel in the superior knowledge of the journeyman, tends to disgust him with his buainess and his future associates, and leads him to refuse to listen to the instructions of those wiser than he.

Possibly, before the time of his apprenticeship expires, he may learn to estimate these annoyances at their proper value, but it is more certain that the feeling engendered by the foolish tyranny to which he has been subjected will influence him through life. How much better for him, and more honorable for his seniors, that they gave him encouragement by word, and assistance by act, so that the young man striving to become one of the honorable guild of mechanics, should feel at once, in his introduction to a shop, a fraternal sentiment toward his fellow-workmen, and be certain that any failures or mistakes he might make would be oocasions of assistance from his superiors. The latter would lose no jot or tittle of their superiority, while the novice would be improved in his workmanship, his respect for himself and his teachers. Deal justly by the apprentice, fellow-journeymen.—*Scientific American*.

ELECTION IN INDIANA—CLOSE CONTESTS IN THE PAST.

The contest for Governor in Indiana is so exceedingly close that it will probably require the official canvass to determine the result. It is likely that there are not 500 votes difference between Hendricks and Baker on a total poll of 375,000.

We have had, in our history, a number of such close contests. In 1849, Marcus Morton, Democrat, was elected Governor of Massachusetts by a majority of one vote over Edward Everett and scattering, the law requiring a majority over all to elect. The vote stood for

Morton,	51,034
Everett and scattering,	51,033
Majority,	1

In 1844, Henry Clay carried Tennessee for President against James K. Polk, the Democratic candidate, by a majority of 113 votes out of a poll of 110,000. In 1840, General Harrison carried Pennsylvania for President by 343 votes on a poll of 288,000, and he was successful in Maine by 410 votes on a poll of 90,000. At the September election in 1840, in Maine, Edward Kent, the Whig candidate for Governor, had 68 majority only over John Fairfield, the Democratic nominee. In 1848, John B. Weller, Democratic candidate for Governor of Ohio, was beaten 250 votes by Seabury Ford, Whig and Abolitionist, of Geauga County. In 1850, Horatio Seymour, Democrat, was defeated for Governor in the great State of New York by Washington Hunt, Whig, by a majority of 250. In 1854, Governor Seymour was defeated for re-election by Myron Clark, the Whig and Temperance candidate, by a majority of 354 only. In 1857, the contest for Governor in Ohio was exceedingly close between Salmon P. Chase, the Republican, and H. B. Payne, the Democratic candidate. On a poll of 300,000, Mr. Chase had but 1.200 majority.

In 1844, the result of the Presidential election was determined in favor of Mr. Polk over Henry Clay, by a majority of 5,000 in the State of New York. Without that State, Mr. Clay was elected. In 1848, the vote of the single State of Pennsylvania elected General Taylor for President over General Cass, and in 1856 the vote of the same State elected Mr. Buchanan over Mr. Fremont. In 1836, the vote of Pennsylvania determined the Presidential contest in favor of Martin Van Buren. These are the closest great elections in our modern political history.—*Cincin. Enquirer*.

VULCANIZED RUBBER-WHEEL TIRES.

If we may give full credit to to the Edinburgh *Scotsman*, Mr. R. W. Thompson of that city has at length solved the riddle, how to make steam locomotives available on common carriage roads. He has invented a tire for the wheels, which, while pliable and yielding, is yet so tough that not even sharp stones, such as are used for macadamizing roads, will cut or tear it. The steamer can run up hill and down, over pavements, or soft plowed ground, and even over grass land, leaving on the grass and the soft earth but a slight mark, though the machine weighs about eight tons! It can be driven through crowded thoroughfares, and turned wheresoever the governor listeth, with as much ease and certainty as a horse would be. It will go up steep grades—1 to 12 or 16 feet—with perfect ease, dragging a dozen tons weight after it. And all this hard service its tires have done without showing the slightest marks of wear. The tires are about twelve inches wide and five inches thick, and offer to the road a tough elastic cushion not very dissimilar to an elephant's foot.

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Gold and Wheat.—The gold product of California in 1867 was estimated at $25,000,000. The wheat crop of 1868 is estimated to be worth the same amount. Twelve years ago, the mines yielded $40,000,000 a year, the wheat lands hardly anything. The mines are still declining, but the increase in wheat production is greater than the decrease in gold. The mines and wheat fields now yield together over $50,000,000. In 1856 there were but 1,500,000 acres cultivated in all modes and products. There is now perhaps 2,500,000. This is but a sixteenth of the whole area fit for cultivation. When the State shall have reached its greatest capability in agricultural industry, the wheat crop will probably aggregate 200,000,000 bushels, worth, in average years, four times as much as the highest figures ever produced in any year from the gold mines. What is better for the State, nearly all the proceeds of the wheat crop remain in the State and promote its improvement, while the gold is nearly all absorbed by foreign markets to make up the balance of trade against the State.

Remedies and Receipts.

To Remove Grease.—Grease may be removed from a coat collar by washing it with a sponge moistened with hartshorn and water.

Gruel.—Take one cracker, and pound it fine; then pour one pint of boiling water on it; add a little sugar and salt. Grate some nutmeg upon it.

Fruit Pies.—A very little soda added to extremely acid fruit, saves sugar. On the other hand, a little tartaric acid added to fruit lacking in acidity, will make it more sprightly and palatable.

Pudding.—Two cups of flour, one of chopped suet, one of raisins, or any dried fruit, one egg, one teaspoonful of soda, one cup of new milk. Spice to suit the taste; steam one and one-half hours. Eat with liquid sauce.

To remove blood stains from cotton and linen, soak them first in cold water, then wash with soap. If you use hot water first, it will make the stains difficult to erase, as the heat will render the albumen of the blood insoluble.

To Clean Gold Chains in Two Minutes.—Put the chain into a small glass bottle, with warm water or eau-de-Cologne, a little camphorated chalk; scrape in some soap. Cork the bottle, and shake it for a minute violently. The friction against the glass polishes the gold.

Buckwheat Cakes.—Make them as usual; set to rise with yeast. Just as you begin to bake them, stir in one teaspoonful carbonate of soda, pulverized and dry. It not only lightens them, but deadens the acid taste of the buckwheat flour. They are as much better as possible.

Sponge Cake.—Three eggs, one and a half cups of white sugar, one cup of flour, and beat together; then take two-thirds of a teaspoon of cream of tartar, and half a teaspoon of soda, dissolved in half a cup of cold water; then add another cup of flour, and one teaspoonful of lemon.

Cold Cup Puddings.—Grate the rind of a lemon into a pint of new milk, let it just boil, and strain it. When cool, beat the yolks of six eggs, and add them to the above, with crushed lump sugar to sweeten it. Pour the mixture into six cups, and steam for half an hour. Next day turn out and garnish with currant jelly or other preserves.

Cure for Toothache.—At a meeting of the London Medical Society, Dr. Blake, a distinguished practitioner, said that he was able to cure the most desperate cases of toothache, unless the disease was connected with rheumatism, by the application of the following remedy: Alum, reduced to an impalpable powder, two drachms; nitrous spirits of ether, seven drachms; mix and apply to the tooth.

Rye and Indian Bread.—Was there ever any bread so good as rye and Indian bread? Pity there are so few who know how to make it. Once in a great while we find some old lady who can do it to a charm. We knew several a few years ago, and one of them told us just how to make it. She said: For a good, thick loaf, I take one pint of rye flour to three pints of cornmeal, one-half tea cup of molasses, or brown sugar. Scald with boiling water—be sure to stir in water enough to thoroughly scald it—cover it up and let it stand till cool, then reduce with cool sweet milk until thin enough to pour into your pan; bake all day, and let it stand in the oven all night, and in the morning you will have the best loaf of bread you ever tasted. If your crust is too hard to eat, remove it, soak in water, and add to your next loaf. It will be richer than the first.

Soft Soap.—Take ten pounds of potash, put it in a half barrel, turn on to it two pailfuls of hot water, the next day melt twelve pounds of grease, and turn in, stir it thoroughly, then add a pailful of hot water every day until your half barrel is full: stir it well when you add the water. If you don't want your grease to accumulate to that amount, make less at a time, say three pounds of grease, two and a half of potash, water in proportion. Be sure the vessel you make it in is strong.

Youth's Department.

IT'S JUST LIKE HIM.

The night scenes, during the siege of Vicksburg, were sometimes grand indeed; shells discharged from the land batteries traced their beautiful, fiery paths high into the air above the beleagured city, and meeting there the missels ascending on the same errand from Commodore Porter's fleet, crossed them in brilliant curves, making the beholder almost forgetful of the mission on which the monsters were sent.

On one of those brilliant nights I came upon a regimental prayer meeting, under a bluff, within short musket-range of the enemy's works. Whenever there was a discharge from our batteries, the Rebel sharpshooters along their lines would reply by a shower of minnie balls, which cut the leaves over our heads, and occasionally glanced down to the ground at our feet. By order of the brigade commander, to prevent drawing the attention, and perhaps the fire of the enemy, the hymns were sung in a low, muffled voice, but loud enough to "make melody in our hearts."

The meeting was led by one of the captains of the regiment. There was something genuine and manly in the piety of the leader, which seemed to win the affection and attention of the soldiers. I was so much struck with it that I could not forbear seeking his acquaintance; and on invitation, meeting him the next day, we walked over to the tent of the colonel.

As the custom was, we were courteously offered a drink from the ubiquitous bottle. As the single glass passed round the circle, nearing me every moment, I questioned in my own mind what terms I should use in declining; but I was yet more interested to see what course my Christian captain would take. When the colonel called upon him, he declined; was invited again, and again declined; and the third time did it so decidedly, and yet respectfully, as not to give offense, nor to be further importuned. I said to him, afterward,—

"Captain, do you always do that?"

"Yes," said he.

"Do you mean that you have never taken any intoxicating liquor?"

"Yes, just that."

"What, not even to 'correct' this Yazoo water?"

"Never."

"You must have belonged to the cold water army in your boyhood?"

"Yes; but I learned something better than that; my mother taught me this one thing, 'what is right is right,' and coming to Mississippi don't make any difference. It would not be right for me to accept an invitation to drink at home; I don't believe it is right here – therefore I don't drink."

A few weeks afterward, passing up the Mississippi River, I addressed a Sabbath evening congregation. After the service a lady came to inquire about her boy—"foolishly," she said, "for it was not likely that in an army of 40 000 men I had seen her boy;" but still she wanted to ask me if I had met him. She told me of her anxiety for his welfare—how she feared that the bad influences of the camp would lead him astray.

"He promised me that he would do well," said she, "and I have no reason to think he doesn't do well; but if I could only see somebody who could tell me, from actual knowledge, how he is doing, it would be such a relief."

She told me his name and regiment. I assured her that there was hardly ground for all the fears mothers were exercising for their absent boys; that very many soldiers were actually becoming better men, growing strong under trial. And then, to illustrate, I told her, without mentioning names, of my captain, of the prayer meeting, and of the scene in the colonel's tent.

"Oh!" said she, "that's beautiful—that's beautiful. His mother must be proud of him."

"Yes," said I, "that she is—and *you are the proud mother!*"

I never shall forget the joy that leaped into her face, and how she sprang across the carpet, and catching my hand in both hers, wet it with grateful tears.

"Is that my boy—is that Willie? I'ts just like him; I knew he would do so. He always was a good boy; he told me he always would be —and I knew he would."—*Youths' Companion.*

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For the Coach-Makers' International Journal.

THE WEATHERCOCK.—N. S. E. W.

BY CHRYSALIS.

Willie Reynolds was a bright eyed, rosy cheeked, laughing little boy of nine summers, and might have been as good a little boy as any of his age had it not been for a temper over which he seemed to have no control.

One morning Willie and his mother were sitting on the front porch, and Willie happening to look upward said: "Mama, I have often thought that the weathercock up there meant something more than North, South, East and West. Don't you think they have some other meaning, and that they were put up there for something else?"

"Yes, my child," answered his mother. "We can put whatever meaning we wish upon them. Would my little boy like to have a motto which he can remember whenever he looks up at the weathercock?"

"Oh, yes, mamma, I would like it ever so very much."

"Then, let N, means *never*, S, *speak*, E, *evil*, W, *Willie*. "Never speak evil, Willie." Willie then repeated the motto to show his mother that he remembered it, and then kissing her good-bye, ran off to school.

Everything on that long day seemed to exert itself to try Willie's patience, and just as he was coming home, a rude boy pushed against him, and threw his slate, covered with his morning lesson, into a pool of water, which washed it all away. An angry expression was on the end of Willie's tongue, but looking upward he saw N. S. E. W., shining bright as gold, and his motto flitted across his mind, and he thought that angry words, was speaking evil; he checked them and turned and smiled on the boy who had pushed him. The boy had stopped expecting to see Willie get mad, but seeing the smile of forgiveness on Willie's face, he felt sorry for what he had done and said:

"I did not mean to push your slate into the water. I am sorry I spoiled your lesson."

Willie very kindly replied: "Oh, that is nothing, I suppose it was an accident, and as for my lesson I can write that over when I get home," and Willie went home feeling very happy for having acted right.

He told his mother when he reached home what had happened to him, and she uttered a fervent "thank Heaven" that her boy had been led to see his error by a simple weathercock. Willie's conduct became more changed every day, and he became the model boy of the school. Kindness and gentleness won for him the love of all his playmates, and no one could get him to speak evil words. He grew up to be an ornament to society, beloved and respected by all, and when he was called upon to die he said:

"The motto that led me to lead a Christian life was: 'Never speak evil words,' and my firm belief is that a great part of the sin in this world came from spreading evil by speaking it."

Thus N. S E. W. done good. May it do all my little readers good, also. We will next see what N. W. E. S. has done.

(TO BE CONTINUED.)

Scraps of Humor.

Why is the bridegroom worth more than the bride? Because she is given away and he is sold.

A young Missourian, eulogizing his girl's beauty, said: "I'll be dogged if she ain't as purty as a red wagon."

"My dear sir," said a candidate, accosting a sturdy wag on the day of election, "I am very glad to see you." "You needn't—I've voted," replied the wag.

"Sambo, wy am dat nigger down dar in de hole of de boat like a chicken in de egg?" "I gibs um up" "Because he couldn't get out if it wasn't for the hatch."

A small child being asked by a Sunday School teacher: "What did the Israelites do after they had crossed the Red Sea?" answered: "I don't know, ma'am, but I guess they dried themselves."

An indulgent father urged an indolent son to rise. "Remember," said he, "that the early bird catches the worm." "What do I care for worms?" growled the youth, "mother won't let me go fishin'."

"A passive verb," said a teacher, "is expressive of the nature of receiving an action, as, 'Peter is beaten.' Now what did Peter do?" "Well, I don't know," said the scholar, deliberating, "unless he hollored."

THE WEATHER.

I think (said Isable) the tearful sky
Is weeping sadly, only hear it sigh!
Do not (said Quilp) commiserate its woes:
It does not weep—It only blows its snows.

It is said that there are people in the "mountain district" of Kentucky so green that they followed a wagon which happened to pass that way twenty miles, "just to see whether the hind wheels would overtake the fore ones."

A bass singer, with a bad voice, was corrected by the conducter of a choir, who said to him: Sir, you are murdering the music." "My dear sir," was the reply, "It is far better to murder it outright than to keep on beating it as you do."

An instructor of a young idea was illustrating the points of the compass to two pupils. "Now, John, what is before you!" "The North, sir," said John, who was an intelligent lad. "Now, Tommy," said he to the other, who had just donned a long coat, "what is behind you?" "My coat tails, sir," said Tommy.

An enraged parent had jerked his provoking son across his knee, and was operating on the exposed portion of the youngster's person with great vehemence, when the young one dug into the parental legs with his venomous little teeth. "Blazes! what are you biting me for?" "Well, dad, you beginned this here war."

A lady asked her little girl, on returning from church, if she remembered the text. "Oh yes!" said she; "It was this: 'The ladies' sewing society will meet at Mrs. McCraken's house on Monday evening next.'"

An Irishman, noticing a woman passing along the street, spied two strips depending from under the lady's cloak. Not knowing that these were styled "sashes," and were hanging in their right place, he exclaimed: "Faith, ma'am, your galluses are untied."

There is a boy down East who is accustomed to go out on a railroad track and imitate the steam whistle so perfectly as to deceive the officer at the station. His last attempt was eminently successful. The depot master came out and "switched" him off.

"When are you going to commence the pork business?" asked one person of another who had a sty on his eye. "Explain yourself, sir," said the afflicted gentleman. "Why, I see that you have a sty quite ready." "True," was the reply, "and I have one hog in my eye now."

"Hiram, my boy," said a tender father to his son, "you must be more careful of yourself, you have not the constitution of some."

"Don't you believe it; I've got the constitution of a horse. Dang it, if I don't believe I've got the constitution of the United States."

A young gentleman, five years of age, was approached with childish endearments by an infant of eighteen months. "Don't you see," said the mother, "that the baby wants to kiss you?" "Yes," replied young maturity, indignantly, "that's because it takes me for his papa."

Affected young lady, seated in a rocking chair, reading the Bible, exclaimed: "Mother, here is a grammatical error in the Bible." Mother, lowering her spectacles, and approaching the reader in a very scrutinizing attitude, says: "Kill it! kill it! It is the very thing that has been eating the leaves and book marks."

A rabid youth of twenty-one was found steadying himself last night against one of the city lamp posts. On being asked by a policeman what he was about, he replied: "Sir—I (hic) I'm—don't you know, you nig'ramus—I'm prac'ising the Grecian bend, I am." He was permitted to finish the exercise at the station house.

A youth, who was being reprimanded for playing marbles on Sunday, was asked: "Do you know where those little boys go who play marbles on Sunday?" He had not been sufficiently taught in regard to a future state, and replied, quite innocently: "Oh, yes! Some on 'em goes to the Common, and some on 'em goes down to the river."

A Confab—Dutchman—Coot morrer, Patricks; how yu tu?"

Irishman—Good mornin' to yez, Hans, d'ye think we'll get rain the day?

Dutchman—Kesso; ve nefer has so moosh rain in a ferry dry time.

Irishman—Faith an' ye're right there, Hans; an', thin, whiniver it gits in the way o' rainin', the divil a bit of dhry wither we'll git as long as the wet spell howlds.

Artemus Ward once had an adventure in Boston, which resulted as follows:

I returned in the hoss cart part way. A pooty girl in spectacles sot near me, and was tellin' a young man how much he reminded her of a young man she used to know in Waltham. Pooty soon the young man got out, and smiling in a seductive manner, I said to the girl in spectacles: "Don't I remind you of some one you used to know?" "Yes," she said "you do remind me of one man, but he was sent to the penitentiary for stealin' a barrel of mackeral; he died there, so I conclood you ain't him." I did'nt pursoo the conversation.

Miscellaneous.

Duties are ours, consequences with God.

Good news is only rumored, but bad news flies.

Some do first, think afterwards, and repent for ever.

Diligence is the parent of science, and the dispenser of excellence.

Many fine hats cover worthless heads; many plaited shirt bosoms cover hollow hearts.

He who does not honor his wife, dishonors himself.

Descend a step in choosing a wife, and mount a step in choosing a friend.

If a man cannot readily recognize merit, it is evident that he has none himself.

Promises made in the time of affliction require a better memory than people commonly possess.

The Great Eastern steamer is now receiving on board the new telegraphic cable which is to be laid between France and America.

It is not what we eat, but what we digest, that makes fat; it is not what we make, but what we save, that makes us rich; it is not what we read, but what we remember, that makes us wise.

The workmen engaged in excavating for the water pipes in Norwich, Conn., dug up some aqueduct logs that are said to have laid in the gorund for seventy years. They were of pine and in a good state of preservation.

Computing Interest.—Here is a new method of computing interest on any number of dollars at six per cent., which appears simple:

Multiply any given number of dollars by the numbers of days of interest desired; separate the right hand figure, and divide by six; the result is the true interest of such sum for such number of days at six per cent. This rule is so simple and so true, according to all business usages, that every banker, broker, merchant, or clerk should post it up for reference. There being no such thing as a fraction in it, there is scarcely any liability to error or mistake. By no other arithmetical process can the desired information be obtained by so few figures.

Buggies without Axles.—J. B. Withey, of Detroit, Mich., has been granted a patent on his new mode of constructing carriages. The following description will give some idea of it. There are no axles, but a short shaft or mandrel, made fast in the hub, each shaft running in two independent metal boxes, secured by proper fastenings to a frame work of wood or iron, in the shape of a capital D, with the addition of three light stay bars running across the D, thus making a very neat, light and substantial gear. All the weight of the load and strain of draft is thrown upon the main journal at the hub, securing at the same time a light, but strong and durable vehicle.

Hints in Regard to Buying Coal.—In buying coal, two facts should be remembered; the fact is the nearer the approach to a square fracture or to a cubical shape of the lump, the better is the coal; slaty coal shelves off in slabs and irregular pieces. The second fact is that the texture should be smooth and glossy. Of course, to test this the lump should have the clinging dust and dirt taken off; if, after doing this, the surface does not rub off on the hand it is a favorble sign. An observance of these two things will save many from the annoyance of having an almost daily cleaning out of the grate incident to using slaty coal.

THE Postmaster General has issued an order that from and after the first day day of January next, the registration fee on all letters registered in and addressed to any part of the United States, shall be fifteen instead of twenty cents.

WHERE SPICES GROW.—The nutmeg is the kernel of a large handsome nut like the walnut. It is inclosed in the same sort of spongy coat as the walnut; the husk opens at one end when the fruit is ripe.

Mace is that which is found between the coat of the nutmeg and the kernel.

Cinnamon is the dried bark of a tree which grows in the East Indies and the Island of Ceylon.

Pepper is the product of a creeping plant which grows in Java, Sumatra and Malacca.

Ginger is the root of a plant which grows in the East Indies.

Cloves are the buds of a tree which grows in Malacca.

Caraway is the seed of a plant growing wild in this country and many others.

IRON TRACKS FOR CARRIAGE ROADS —Some one, in exposing the "penny wise and pound foolish" policy too prevalent among farmers, of having poor roads, remarks as follows about the practicability of the iron rail for all sorts of carriages through the whole country:

The success of horse railroads has put people to thinking of applying the same principle to ordinary carriage roads. Why not, they ask, have our great thoroughfares at least laid with iron rails adapted to the use of common carriage wheels? Well, why not? Because of the great expense? But the expense of making and keeping in order any great thoroughfare is large; and after all, few are kept in really good condition; while roads once well laid with iron are almost faultless to begin with, and are proved to be very du able, and, what is still more to the point, may be laid with iron and kept in repair for *less* money than a first class mecadam road can be. If this be true, then it would be a matter of immediate economy in dollars and cents—to say nothing of comfort and convenience—to lay our great highways with iron rails. In England, where road making has been carried to a degree of perfection very rarely seen in the United States, over which one horse will carry, with the same ease, double the load that he could draw on our roads, even in England the question is now being seriously agitated of adopting iron rails for common carriages all over the kingdom. And though it may be some time before the system will be admitted and adopted even in England, it must ultimately prevail both in England and America.

Answers to Correspondents.

P. B., PARIS, KY.—In answer to your question, we will give you Mr. T. Acks' answer to our inquiries on the same subject:

"In regard to my promise made in the July number, I do not know what to say about it. I have a cheap, simple, easy invention for that purpose; but my trimmer friends tell me I ought, in justice to myself, have it patented; and I am of their opinion, as it will have the desired effect, with scarcely a dollar a job extra cost either in time or material. The reason for delay is merely financial. However, I may decide to publish it in the next No. (3) of the JOURNAL, and give the benefit of the idea to the readers.

C. S., FINGALS, ONTARIO.—Persons having sent us 35 cents for specimen number, can deduct that amount from the regular subscription price, and forward the balance.

G. B. G., HORNELLSVILLE, N. Y.—The half-round knife belonging to the three-edge raisers will be sent by mail to those who have not received them, as soon as they are ready.

C. E. W., NEWARK, N. J.—Our time is so much taken up, we cannot possibly attend to procuring frames for those who desire their engravings framed, besides the cost of transportation will more than make the difference.

A. & S., SINCOE, CANADA —We have the promise of a scale draft of a French velocipede for our next number.

We shall also give in the next number a design for a very fine carriage, suitable for any section of country, furnished us by Mr. Chas. S. Caffrey, of Camden, N. J.

G. W. B., STANSTEAD, CANADA.—We have not yet decided whether we shall dispose of any of the steel engravings other than to subscribers. It was not gotten up to speculate with, but solely for the benefit of our patrons.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

WANTED—A SITUATION at Carriage Woodwork under instructions. Can give good references. Address Joseph G. Martle, Spring Garden P. O., Lancaster Co., Penna.

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, October 24, 1868.

Apron hooks and rings, per gross, japanned, $1.20 to $1.50; silvered, $9.

" snaps, silvered, per gross, $5.25.

Axle-clips, Coleman's Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 30 per cent. discount.

Forged, Coleman's Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15½ per cent. disc't.

Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.

Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, common, per lb., 7c.; leather washer, 7½c. per lb.

" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50.

Axles, Wilmington, C. H. Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.

" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.

" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.

" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

" Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Axles, Archimedian, short, improved taper, No. 1, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $7.75; 1⅜, $10; 1½, $12.50.

Axles, Archimedian, Half pat., taper No. 3, ⅞ and 1 in.,; $6.00; 1⅛, $7; 1¼, $8.25; 1⅜, $10.50; 1½, $13.

" " Long, improved taper, No. 2, ⅞ and 1 inch, $7.50; 1⅛, $8.50; 1¼, $10.25; 1⅜, $13.50; 1½, $16.50.

" " Half pat., No. 4, ⅞ and 1 inch, $8.00; 1⅛, $9.00; 1¼, $10.75; 1⅜, $14; 1½, $17.00.

The Archimedian axles are all case hardened; they can be made of Salisbury and Lowmoor iron at an average advance on prices here quoted of $1 to $2.50 per sett. An axle of this brand is also steel converted by the celebrated Bessemer process; it cannot be excelled. Price of short half pat., per sett, ¾ inch, $11; ⅞, $12; 1 inch, $13. Long do., ¾, $13; ⅞, $14; 1 inch, $15.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 35 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1; 1 inch, $1.30.

Buckram, per yard, 17 to 20c.

Carpet, per yard, Brussels, $1.90; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 50c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13½c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.90 to $2.

" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, per doz., japanned and sil., $1.10 to 1.50.

Damask, German cotton, double width, per piece 30 yds., $18 to $21; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 80c. per yard.

Dashes, buggy, per dozen, rough, $20; silver plated, $28. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 35c.; 6-4, 53c.; drilling, 5-4, 46c.; 48 inch, 50c.; 6-4, 58c.; duck, 5-4, 67c.; 50 inch, 70c.; 6-4, 80c.; pat. tan back muslin, 5-4, back 55c.; do., drill, 5-4, 65c.; 48 inch, 70c.; flock drill, 48 inch, $1.00; do., muslin, 85c.; vulcanized rubber drill, heavy, $1.75; light, $1.60; 48-inch, $1.50.

Felloe plates, wrought, per lb., 16c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.

" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Patent Improved Knob and Buttonholes, a good improvement. $6 per gross.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 8c.; silk stripe, 10½c.; silk barred, 13½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 17c., do., No. 2, 15c.; railing and collar, 26c. to 29c.; enameled top, No. 1, 28c. to 31c.; do., No. 2, 26c. to 29c.; enameled trimming, 26c. to 29. Pat. collar, 28 to 30; bow leather, 26c. to 29c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $5.00 per gross.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

" spoke tenoning machine, each, small, $15; large, $25.

" bolt cutting tenoning machine. each small, No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 12c.
Name plates, per dozen, engraved, German silver and real silver, $4 to $4.50.
Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, star and flint, per ream, $4.50 to $6.00.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.
“ improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
“ Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, patent black, $11.75; do., Bright, $13.75; Baltimore patent black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
“ Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
“ Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $4.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95, 1⅛. $2.10; 1¼, $2.25.
“ ball. ¾ inch, $2.05; ⅞, $2.20; 1 inch, $2.35; 1⅛, $2.50; 1¼, $2.65.
“ close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
“ close plated, extra heavy, plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.
“ ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.
“ neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
“ Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8.25; 5 bows, $10.50.
“ “ New York patent, per dozn setts, 4 bows, $12.
“ Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
“ plated, short, $1.20; 1 long iron, $1.37.
“ japanned, short, 55c.; 1 long iron, 62.
Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inches, 1c. per lb. more.
“ Bright tempered, per lb., 1¼ in., 21c.; 1½ in., 20c.
“ Black Springs, 1½ inch and wider, 16½c.
“ Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.
Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.
“ - long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.
Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.
Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.
Top props, silvered, per sett, common, 31c.; extra, 70c. to 90c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.
Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
“ Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
“ dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
“ machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.
“ “ Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.
Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.
Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; ½, $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, $3.
Tufts, per gross, common worsted, 18c.
Twine, tufting, per lb,, No. 16, 55c.; best mattress, 85c.
Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.
Whip sockets, soft rubber, per dozen, No. B, $3.50; No. C, $3.75.
“ improved, all black, per dozen, $1.75; black, silver top, $2.
“ imp., cov. and stitched, per doz., $2; sil. top, $2.25.
Whip socket fasteners, $3.25 per dozen pairs.
Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.
Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
“ ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.
“ white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
“ sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
“ hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.
Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 inches diam., $1.10 to $1.40 per set, double extra, 4 to 6 inches diameter, $2 to $2.25 per set.
Poles, hickory, per dozen, rough, $12; finished, $16.
Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; fihished do., $12.
“ sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.
Shafts, express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.
Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.
Seat rails, whole, hickory, $7 per dozen; lazy backs, $8 per dozen.
Seat arms, per dozen pairs, $1.25.
Spokes, buggy, hickory, per sett, 1½ inch and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.
Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.
Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body. No. 1, hard drying, $4.50; carriage, No. 1, light color, $4. carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.50; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.
PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.
PAINTS—Black—Raven's Wing drop, per lb., 45c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.
Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.
Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 50c.; pure Paris, 50c.; Brunswick, 15c.
Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Vermillions—English pale, $1.60; deep, $1.50, German gothic pale, $1.50; deep, $1.50; Chinese, $1.60; Trieste, $1.25; Italian, 45c.; American, 35c.; English Venetian, 5c.; red lead, 15c.
Whites—Pure lead, per lb., 15c.; Colorado lead, 13½c.; Nevada, 11½c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.
Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c.; English chrome, $1.10; French do. $1.20.,
Miscellaneous—Drying Japan, $2.00; turpentine, 60c.; linseed oil, $1.20; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 10c.

BRUSHES.

Paint—0, 65c.; 00. 75c.; 000. 85c.; 0000, 95c.
Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.
Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4.
Best Paint Mills—Large, $8; small, $6.50.

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CORRECTED BY WILLIAM M. WHITAKER,
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Oval and Half-Round Iron, ¾, 5½c.; ⅝, 5¾c.; ½, 6c.
Band Iron, 5½c.
English Refined Slit Rods, 6¼c.
Scroll Iron, ⅞ and 1x3-16, 6c.; ¾ and ⅞x⅛, 6¼c.
Steel Tires, Swedes, 1x3-16, 11½c.; ⅞x3-16, 11¾c.; ¾x⅛, 12c.; ⅝x⅛, 13c.
Spring Steel, 1¼ and larger, 10¼c.
Norway Horse Nail Rods, 8 cents; do., Shapes, 8 cents.
American Rolled Horse Shoe Rods, 5½c.
American Hammered Iron, 6½c.
“ “ Axle Trees, 7c.

PROSPECTUS, VOL. IV.

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A MONTHLY PUBLICATION,

DEVOTED TO THE INTEREST OF THE TRADE.

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DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

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Always in Advance.

NOTICE.

The indulgence of the reader is asked for any omissions or mistakes that may be discovered in the present number. The editor being absent, enjoying a season of rest from the severe mental labors of the office, and our not having fully donned the harness, is our apology. Whatever, then, the Journal may lack in the general make-up, please charge it to inexperience on our part.

C. W. V.

EDITORIAL CORRESPONDENCE.

SOUTHERN VIRGINIA NOTES BY THE WAY.

Richmond, Va., November 20, 1868.

Knowing that anything relating to the section of our country, so lately the scene of such a struggle for the perpetuity of our great Republic, will be interesting to the readers of the Journal, I have penned the following observations, during my absence from home. Business, outside of the Journal, requiring my presence in Southern Virginia, I left the office in the hands of friend V., and, in company with a friend, took the cars for Baltimore; from thence, by steamer, to Norfolk. Passing down the Chesapeake late in the afternoon, we had a splendid view of Fort McHenry on the right, noted for the prominent part it performed during the late struggle in keeping down the rebellious spirit in Baltimore. Far on the left, we beheld the Baltimore County Almshouse. Still further, near the mouth of the Patapsco, we passed Fort Carroll, built on the shoals near the middle of the river; though many years building, it is still far from being effective, the southern wall having been taken down on account of the quick-sand and imperfect foundation.

The sunset view was splendid; the sky clear, and the rays of the sun, as they struck the water from between the hills, was really magnificent, but they were soon gone, and darkness hovered around over the waters that were but a few moments before sparkling with the sunlight. Entering the saloon, and enjoying ourselves as best we could for awhile, we retired to our state room, and was soon lost to all that was transpiring around us. Desiring, if possible, to get a glimpse of that memorable place, the bulwark of the nation, Fortress Monroe, we arose at 4 o'clock, our steamer having touched at the landing to leave some freight; but the darkness was too great to get any idea of its appearance or situation. Passing on, we reached Portsmouth at 6 o clock, where we landed and took up our quarters at the American Hotel.

Norfolk being situated opposite, we spent the day in viewing the two cities, and calling on our brother coach-makers. Portsmouth is a well laid out city, streets wide and land level. Although the Gosport Navy Yard is located here, yet there is, at present, but little business being done. We visited the Navy Yard but found only here and there the sound of the hammer; although very interesting to see the different kinds of implements used in war, it would have been much more interesting had the full force been engaged on iron clads and other ships of war. Norfolk, unlike her sister, presented quite a business appearance; buildings being erected, and improvement being made in every quarter of the city—the more noticeable from the fact of everything being so dead in Portsmouth. The principal carriage manufacturers are A. Wrenn and Pullin & Pearce, who do good work.

In the morning, we took the cars to Weldon, and from thence to Gaston, through a portion of North Carolina, on to Clarksville, Va. The country on the line of the railroad we found anything but interesting, very rough and rolling, presenting the general appearance of poverty and desolation, so very unlike the Northern farms; we saw but little that would interest our readers. The want of money seems to have taken the ambition out of the inhabitants entirely; land is being unimproved, buildings are beginning to decay, the roads are entirely neglected, and would be considered in the North impassable. We found the inhabitants hospitable and kind, anxious the Northern people should come down and buy their land and make their home among them. Though very rough, the soil is susceptible of a high state of cultivation, and can be purchased at a very low figure—fine farms of 200 or 300 acres selling for from $2 to $5 per acre, and, in some instances, with good dwellings upon them, but needing repairs. The fences are generally poor, and no barns, log cabins answering in their stead; generally from two to six or eight cabins will be found on a plantation used by the freedmen, who are now in a terrible state of destitution; in fact, all classes, with few exceptions, find it difficult to get the necessaries of life in the commonest style The cry is no money, and everybody in debt. The chance for speculation in land must certainly be very great, for this state of affairs cannot long exist; the land, much of it, must be sold, and that soon, there being no money here. Northern men must buy it for what they are willing to give, and Northern energy will soon clear the land, build railroads, school houses, (which, by the way, we have not seen since leaving Baltimore,) and increase the price of all kinds of property in this now desolate section.

Many in the North fear to go South, thinking they will be subjected to persecution and injury on account of the late difficulties between the North and the South. So far as our observations go, in the section we have visited, no fear need be entertained, for it seems to be the general desire for Northern capital to put the wheel of progress in motion. There are always exceptions; mean men can be found in all sections, those who stand ready to filch every cent out of the pockets of all who unfortunately fall beneath their grasp. It was our lot to meet with two such characters at the junction of what was the Roanoke Valley railroad with the Gaston and Raleigh road, and for the benefit of all who may chance to stop at the Junction, we will give their names—Dr. Austin and Will Kemble, the latter a storekeeper. Were the Southern people generally of this stamp of smooth-tongued *robbers*, we pity all who are forced to have dealings with them. It would be an act of humanity on the part of the conductors on the Gaston and Raleigh railroad to advise passengers against stopping at the Junction; for our part, we hope we shall never be so unfortunate as to be placed within their grasping, avaricious reach again. What a contrast presents itself when we remember the very hospitable manner in which we were received and entertained, late in the night, by Mr. Thos. Burwell, a farmer, between Townville and Clarksville. Instead of taking advantage of a stranger he persistently refused to receive any compensation for the comforts and privileges we had enjoyed under his roof, saying he had never yet accepted the first penny for like accommodations. May a kind Providence prosper him through life in all his undertakings.

The plantations, through this section, are generally well stocked with timber, from one-fourth to one-third of the farm being timber, and, in most instances, of pretty good growth, principally oak and pine. The town of Clarksville, where we tarried for several days, presents no very prepossessing appearance; but little business doing, and the people generally seem to have but little ambition to improve the appearance of the town. The site of the town is very uneven and illy adapted for a town of much note. The main feature in its location is being at the junction of the Dan and Staunton rivers, forming the Roanoke, which passes Gaston and Weldon, through North Carolina, emptying into Albemarle Sound. Between Clarksville and Gaston, where it intersects with the railroad, it is navigable only for flat boats on account of the falls and rocks.

Leaving Clarksville, we passed over to the Richmond and Danville railroad, taking the cars at Wolf Trap station for Burkeville, where the South Side railroad intersects, leading to Petersburg, which place we reached early in the evening, stopping at Jarratt's Hotel, a very good house, but pretty steep in their charges. Petersburg is a place of good size, and has been a place of considerable business. The tobacco manufactories being closed, every one seems to be complaining, and, of course, the poor suffer most, and many white as well as black must be obliged to make out with but little to eat or wear the coming winter.

Our time being limited, we were unable to visit the fortifications or anything of note; of course, wherever we went we made it our business to visit the carriage factories. There are several shops here, but only one doing any amount of business, Mr. St. Clair, who manufactures a good class of work.

Our next stopping place was this city, the place we have long desired to see, more especially on account of the prominence given it during the rebellion. The portion on Main street, consumed by fire at the time of Lee's evacuation, has been rebuilt with fine business houses; *Libby Prison* and *Castle Thunder* are turned into tobacco manufactories, and the traces of war are being rapidly swept away.

The carriage business in Richmond is receiving considerable attention, there being several good shops here, among which are Geo. A. Ainslee, R. H Bosher, and Lambeth & Francis. Wherever we went among the craft we were cordially received; the JOURNAL having preceded us, our name only was necessary to receive a friendly greeting.

But we are reminded that to get this in the next JOURNAL, it should be in the hands of the printer at this writing, and we hasten to close, and trust it to the care of Uncle Sam for safe delivery. I. D. W.

THANKS.

To Mr. M. W. Allen, of San Francisco, Cal., for the *large* list of subscribers received through him the past week—by far the largest club received at one time from any person for the present volume. We hope the leaven will continue to spread until every coach-maker in the Golden State, whether boss or jour, will be in possession of a copy of the JOURNAL. Mr. Chas. E. Ward, of Rahway, will accept our thanks for his untiring energy in advancing the circulation of the JOURNAL. To Mr. W. A. Casterline, of Brooklyn, N. Y., we feel indebted for the interest taken in procuring for us so large a club. Among those who have sent us *large* clubs the past few weeks, and to whom we return special thanks are—Brigham & Warren, Three Rivers, Mich.; James Reid, Toledo, O.; J. Rylands, Bridgeport, Conn.; Wm. Shaff, Circleville, O.; J. G. Wright, Lowell, Mass.; J. E. Curtis, Schenectady, N. Y.; John McNee, London, Ont.; Adam Meisel, Wilmington, Del.; H. Galbraith, New Haven, Conn.; John Kemp, Ravenna, O.; A. L. Merrill, Concord, N. H.; H. Johnson, Detroit, Mich.; J. B. Edwards, New Haven, Conn.; Amos Sailor, Moline, Ill.; H. L. White, Boston, Mass.; J. L. Morgan, New York City; J. D. Burke, Brooklyn, N. Y.; W. J. Dollinger, Springfield, Ill.; Jos. Brown, West Troy, N. Y.; J. M. Kimball & Co., Portland, Me.; J. S. Dimock, Halifax, N. S.; H. A. Walker, Kingston, N. Y.; C. P. Walker, Amesbury, Mass.; H. Hawthorn, Newark, N. J.; E. H. Beatty, Philadelphia; C. Tucker, New Haven; F. D. Kennedy, Albany, N. Y.; J. W. Hibbs, Washington, D. C.; T. B. Nixon, St. Louis, Mo.; Lem Cretors, Leavenworth, Kansas; E. N. Dougherty, Camden, N. J.; A. L. Bollinger & Co., Genesco, Ill.; Briant & Stulen, Towanda, Pa.; Shoemaker & Terry, Dundee, N. Y.; N. Lannert, Evansville, Ind; M. M. Walsh, Hillsboro, Ill.; W. Thornton, Centerville, Md.; J. L. Mullings, Huntingdon, N. Y.; Wm. Soden, Evansville, Wis.

"PURITY OF MOTIVES."

It is amusing, sometimes, to witness how a bewildered human biped will duck and dodge when a plain matter of fact has been brought to his notice. Especially is this true, when the party first laying a charge against his fellow, in the same breath, commits the unprincipled act of which he complains, and then what a nice dodge it is to string out an array of false charges against the private character of his opponent, so as to attract attention from the investigation of the truth. "Purity of motives" is advanced as a clincher by the artful dodger who would like to make the impression, on one set of minds only, that he has a sympathy for the well being of the workingman, which he has shown by a wholesale denunciation of every plan they have adopted to better their condition Even the idea of co-operation was spoken of as a failure, and as not possessing any advantages to the mechanic who engaged in it.

"Purity of motives," indeed! We admire purity of motive, for it is one of those rare plants that is prized because of its scarcity. But when an individual is actuated by pure motives he does not pander to the machinations of the strong against the weak, or the rich against the poor, but takes an humble mediatorial position and derives his greatest pleasure, not from holding up the hands of the strong, as opposed to the weak, nor that of the rich against the comparatively poor and defenceless, but by endeavoring to reconcile the parties, which, in nine cases out of ten, the stronger or richer of the two will be entreated to be more merciful. No! No! your artful dodger is as little moved by the wail of the defenceless as the painted savage, whose eyeballs protrude with very delight as he buries the tomahawk into the brain of a defenceless female.

Purity of motive is a gem without price, and whoever wears it on his brow is possessed of riches more enduring than the wealth of the whole world. But does that man dare to claim that he is prompted by pure motives, whose every printed expression of sentiment, with reference to the elevation of labor, has been of that character to bring into bad repute the characters of men of sterling integrity, and to so falsify the plans and motives which prompted them to action, as to open the breach wider, and create an enmity which would otherwise have been unknown. Were the philanthropists of our day cast in such a mould, how soon would civilized society return to barbarism, and freemen become the slaves of powerful and wealthy tyrants.

In regard to the charges of dishonesty on our part, we shall give but a brief reply. Our financial record with the I. U. stands clear, and, when called upon "to give an account of our stewardship," did not "fail to do so satisfactorily" to those whose business it was to investigate; and, in taking possession of the JOURNAL, we paid for it every dollar it was worth. The editor of the *Magazine*, with all of his "purity of motives," hesitates not to stoop so low in his efforts to keep his sinking ship afloat as to assail the honesty and private character of his competitor. If he expects to succeed by publishing *libelous* articles, we predict his race will soon be run. Probably the editor has forgotten the circumstances under which the *Magazine* was started. We can assure him, however, when the Journal was started, we did not *steal the subscription list of a cotemporary*, nor engage another person to do it for us; *our* notions of "purity of motives" would hardly admit of such doings. Our memory is not very good at best, but we have some faint recollections of how the editor's "purity of motives" enabled him to run his machine on the track built by a man west of the Alleghanies, and, if he is desirous of treating on personalities, we will meet him on his own ground.

The editor boasts that his "circulation now exceeds that of any other time since his (ours) came into existence." So much for the influence of the Journal; he must certainly appreciate the benefits he is deriving from the occasional *puffs* we are giving him, and as one good turn deserves another, he could show his gratitude by occasionally mentioning the name of the Journal, a thing he has jealously avoided doing for fear some of his readers who, perchance, had not heard of such a publication in the interest of the craft, might desire to see a copy. The editor is certainly consistent in some things, and we are always willing to give him credit for all he is entitled to; for instance, he advises employers to prohibit us from canvassing their shops, thereby hoping to kill the Journal, and, of course, (*he having refused to exchange with us,*) could not, with any degree of propriety, subscribe for the Journal, although we do for the *Magazine*. We suppose, however, he does not experience any difficulty in seeing it regularly, as there are so many copies distributed in his immediate neighborhood—a difficulty we should labor under in regard to seeing the *Magazine*. "Purity of motives" prevents him from buying a thing he can borrow. Notwithstanding the *large* increase in his subscription list, we venture to say that we can show more *bona fide* subscribers among the *boss* coach-makers of the country than the *Magazine;* and further, we will show *ten jours* for every *one* he can produce.

The article in question winds up by saying, "we shall continue to speak our honest convictions as long as it pays," &c. Will the editor please explain? He certainly does not mean that as soon as it ceases to pay he will "go back" on his "honest convictions" of what is right. How will that agree with his boasted "purity of motives?" But we have followed "our opponent" far enough "through his *idiosincricities,* (Webster in the shade,) in order to show the fallacies of his charges," and will leave him to meditate on the folly of undertaking to compress steam, even though it may be from a "Little Teapot."

OFFICE CHART.

We are now engaged in getting out a new office chart, printed on the best lithograph plate paper, suitable for framing. It will be 24 by 30 inches, and contain from 25 to 30 plates of the latest styles coaches, coupes, rockaways, buggies and sleighs. Price $1. post paid, and sent on a roller to prevent breaking.

Every Coach-Maker should have one hung up in his office. Send in your orders, and as soon as ready they will be forwarded.

We are also prepared to furnish BUSINESS CHARTS, printed on PASTE BOARD, 18 by 22 inches, containing from 12 to 16 cuts, with business card, printed in centre *in color*, at the following rates: 25 copies, $12; 50 copies, $18; 100 copies, $30. Printed on good quality of paper, $15 for 100; $25 for 200, and $5 for each additional hundred. Persons so desiring can select such cuts as they may wish, from those heretofore published in the Journal, by paying $3 additional.

THE VELOCIPEDE.

Webster's definition of the word is as follows: "Velocipede, [*L. velox* swift *pes* foot,] a carriage for one person, having two wheels placed one before the other in the same line, and connected by a beam, on which the person sits astride and propels the vehicle, by striking the tips of the toes against the earth." It is an old saying that there is nothing new under the sun, which is applicable to the vehicle mentioned.

It was in use during the latter part of the last century, but was greatly inferior in its construction, compared with those now being manufactured. As stated above, it consisted of two wheels, placed one before the other in the same line, and connected by a beam, on which the person sat astride, being propelled by striking the tips of the toes against the earth. An improvement was subsequently introduced, which admitted of a movable front wheel, under the control of the rider, by means of which he changed its course. This old style of constructing the velocipede, still has its admirers in Paris, and they claim for it a higher rate of speed than can be gained by the treadle movement. No doubt it is more easily managed by the novice than the new style of two-wheeled vehicles, where the feet are employed to give motion to the driving wheel. For it requires some practice and skill, on the part of the learner, to keep his balance while propelling the machine.

Already have the manufacturers of America begun to turn their attention to making improvements on the French patterns, which are said to be heavy and difficult of construction. An important improvement has been made, we think, by Mr. Thos. R. Pickering, of New York; an engraving of which we saw in the *American Artizan*, of October 21st. The description is as follows:

> "The reach or frame of this velocipede is tubular, and thereby great strength and lightness are secured. The bearings are all of composition or gun metal, and so attached that when too much worn they may be replaced by others, which are interchangable, like the parts of sewing machines and fire-arms. The hub of the hinder wheel is bushed with composition or gun metal, and the axle is of peculiar construction, constituting in itself an oil box, by being made tubular, and closed at either end by a screw. on the removal of which, it may be filled with lard oil. This oil finds its way out to the bearing as fast as required, through two or three fine holes, made for that purpose in the axle.
>
> "One important feature is the arrangement of the tiller or steering handle which is brought well back, and sufficiently high to require the rider to maintain an erect position, with his arms well back and hands well separated, thus keeping the chest expanded and allowing free play of the lungs. As considerable exertion is required by the arms to conteract the effect of alternate pressure of the feet upon either crank of the driving wheel, the exercise is extremely developing to the arms, and with a proper of the handle, to the chest also.
>
> "The stirrups require notice, as they differ essentially from those of other velocipedes, which permit only the shank of the boot to set on them, and have their single flat side kept in position by a weight cast on the bottom. The stirrups of this velocipede have their exteriors, three-sided, with circular flanges at each end, and as they are fitted to turn on the crank pins, the pressure of the foot will always bring one of the three flat sides into proper position. These flat sides are roughened to prevent the foot from slipping, and are so shaped as to permit the use of the fore part of the foot, and bring the ankle joint into play, and thereby relieving the knee considerably, making the propulsion much easier than when the shank of the foot is used exclusively.
>
> "The cranks are made adjustable to suit different persons, and different kind of road and inclines. The saddle is supported on a spring, giving an elastic seat. The brake is exceedingly simple and effective, being composed of a block of hard wood attached to the under side of the back part of the saddle, which is shaped to form a good brace or rest for the lower part of the back of the rider. The spring of the saddle being adjusted to suit the rider, the brake-block clears the face of the hind wheel, until it is required to be used, and then a pressure forward against the tiller with the hands, and backward against the after part of the saddle with the back, instantly compresses the saddle spring, and brings the brake into action on the wheel."

As the ladies will want to enjoy the sport, a nicely adjusted three-wheeled vehicle would be most desirable, unless they should conclude to adopt the Bloomer costume. Let us have, then, three-wheeled velocipedes for the ladies, as it would be unkind to derive them of such a source of out-door pleasure and exercise. Unlike the national game of base ball, the velocipede excitement will be heightened and made more attractive by admitting the gentler sex into the list of competitors for prizes.

Eugenie, the Empress of France, and the acknowledged leader of the fashions, is said to be an adept in the management of the velocipede, possessing one valued at $2,000. We may look for a perfect blaze of excitement over this new sport, for we feel confident that the ladies of America will not hesitate to join in it. The base ball furore will subside, and the enclosures be covered by rival velocipedists.

We have become familiar with such names as "The Athletics and Atlantics," "Haymakers and Philadelphia," "Cincinnati and Buckeye," "Nationals," &c., and with the slang phrases of "fielders," "fly catchers," "out on the fly," &c. What new names will be given to the velocipede, and what technical terms will be used, remains to be seen.

OUR NEW DEPARTMENT.

We are proud to be able to present to our readers this new and interesting department, connected with the wood work. The editor, Mr. Spoke Shave, is a practical wheeler, and what is of the first importance, he is also a close thinker. We feel satisfied that much valuable information will be disseminated through his instrumentality.

It will be noticed that he is not one of that class who, only having a smattering of the trade, set themselves up as teachers of others, and can bear no suggestions without becoming soured, and somewhat acrimonious. We like his suggestions to his fellow-craftsmen, for if he should be the means of awakening an interest in this branch, our patrons will be greatly benefitted by the ideas advanced.

In our past experience, where a carriage had a good set of wheels under it, much praise was bestowed upon it by the owner, although other parts may have been often repaired. But let the wheels be inferior, and the other parts ever so good, and the vehicle is denounced as worthless.

We consider that a properly proportioned and well made wheel is one of the main points to be looked after by every first-class builder, and especially by those who are laboring to establish a reputation for good work. There are several points about a wheel which are still a matter of controversy among wheelers, and we trust that through the columns of the Journal, information may be elicited of value to all concerned. A spirit of sifting investigation is manifest in almost every branch of mechanics. Having wearied of skimming on the surface, and taking for granted whatever has been handed down to them, men are digging down, as it were, to find the deep foundation of things. Mechanical power, as formerly taught in some particulars, has been submitted to the crucible, and will come out refined and made more valuable by the test. Improvement is the watchword among our mehanics, in the varied branches, and the applications for patents are on the increase.

The mechanic, by his genius, is conquering the world, dashing to the ground now this, now that system of error and oppression, and will, in time to come, bring the nations of the earth to a common level, and on terms of lasting peace.

Fashion Plates Explained.

DREUZE VELOCIPEDE.

BUILT BY MICHAUTT, OF PARIS.

Plate No. 8.—This is drawn from a velocipede built by Wood Brothers, of New York, and being a fac-simile of Michautt.

The front wheel is the highest, it being 37½ inches high; the hind wheel only 31½ inches high, including the tire; the hub is 7 inches long, and the wheels are made straight, (no dish,) and with doged spokes. The felloes (rims) are 1⅛ inches. The front steering pillar and fork is forged of ⅞ round iron. At the point B the shoulder is 2¼ inches wide, thus giving a bearing for the steering-pillar socket to work on, and helping to steady the front wheel. It clasps the axle on both sides, a notch being worked on the ends for that purpose ¾ of an inch larger than the axle; a piece of brass being then set in to fit the axle, and on which the axle works, thus reducing the friction and wear; both of the notched ends are finished as bolts, a clip thus holding the brass firmly to its place. The driving treadle is next put on outside the fork; the foot rest "cap" is of brass, and weighted at the bottom, and working freely on the treadle, so as always to present the proper place for the foot. Those treadles are placed in opposite positions on the axle, so that when one is up the other is down. The straight handle is 24 inches long, and works freely in the centre socket and ends of handle brace.

The connecting perch is the most difficult part; it is made of square inch iron, forked (or double) from the point F to the hind axle, where both ends receive the axle as in the front fork. From the point F to C plain at C, it is formed to receive the saddle-spring head, which is 1¼ inches wide. (The top engraving represents the top view.)

The socket is the next. This socket is 6½ inches high, and large enough to receive the steering pillar before described, and all in one piece. The length of this socket steadies the front wheel; at its base, where it rests on the steering-pillar shoulder, is very heavy and solid; from the steering pillar forward it is tapered to the cross pieces marked R. foot rest. These are used to relieve the feet (from the treadles) when running very fast or down hill. From the R foot rest forward is merely ornamental.

The saddle spring is a single leaf, 1½ inches wide at the widest part, and 1¼ inches at front head, and 1 inch at the back head. The saddle is 14 inches from front to back, lightly stuffed, and fastened to the spring with 2 clips, allowing it to be moved to suit the rider. The back pillar is also 1 inch round iron, forked from the point A to the axle, where both ends receive the axle as in front pillar; from the point A to N it is single; at N it receives the back end of spring with a bolt. The brake passes through the fork of the perch at F, a small eye being worked under the perch to bolt (hinge) the brake bar, as shown at T. At the upper end of brake bar, a small wheel is set in for the string to work on; the string then passes through the space in front of the front spring-head to the handle, and there fastened. It is worked by merely turning the handle.

These vehicles require some practice to be able to manage them, having only two single wheels, one following the other. It appears, at first sight, as if it would be impossible to keep it upright; but get it once in motion, and able to manage it, and its speed, about twenty miles an hour, will repay the trouble expended in learning to ride it.

The best way to practice is to mount it near a fence or railing, and propel yourself along until you have learned the motion of the feet and the correct balance. The balancing motion is not unlike skating when you feel yourself leaning too far to one side, recover the perpendicular by leaning to the reverse side. They can be run on almost any kind of a smooth hard road. The best way to start it is to give it an impetus, and then spring lightly into the saddle. They sell in New York for $125 now, but from the number of carriage-makers who are engaged in building them, I think the price will soon be reduced.

Three-wheeled velocipedes for ladies' use are also being built, and are very fashionable in Paris.

We know of no reason why these vehicles should not become very popular in America.

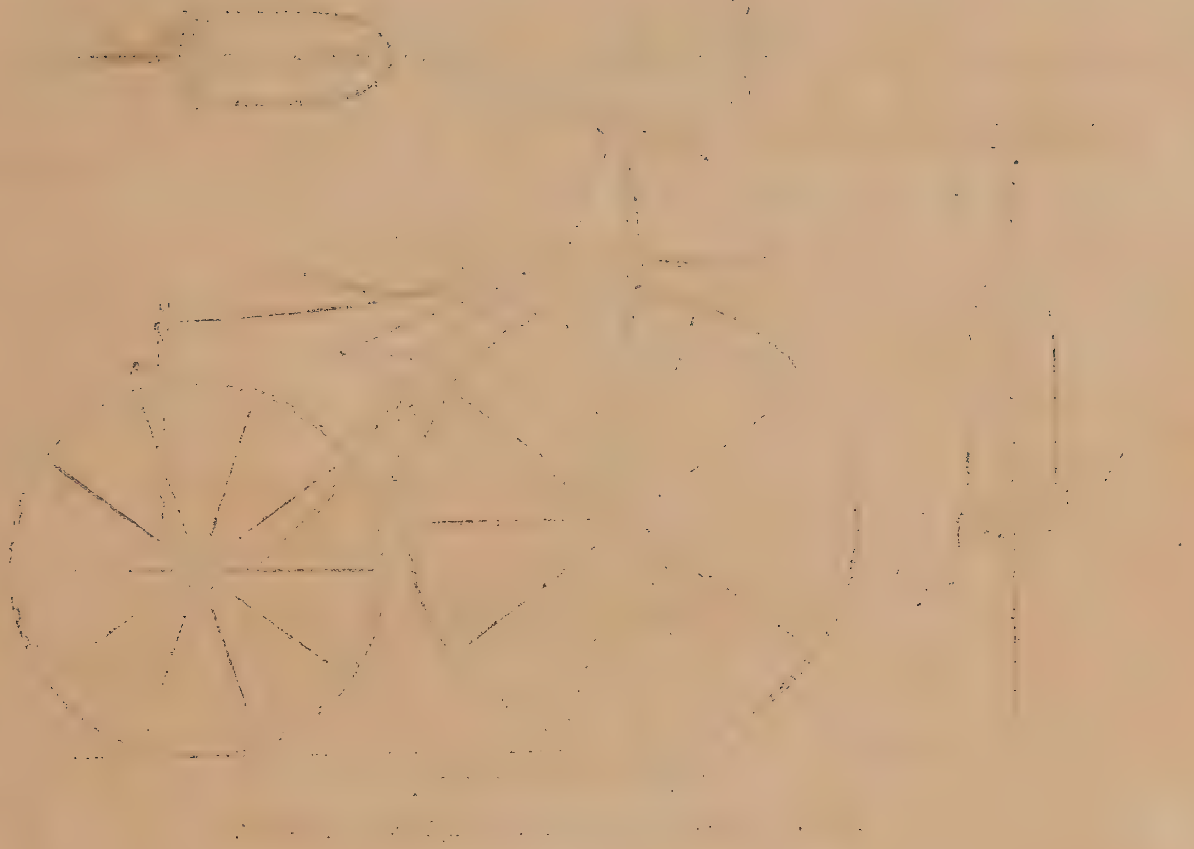
LANDAULETTE.

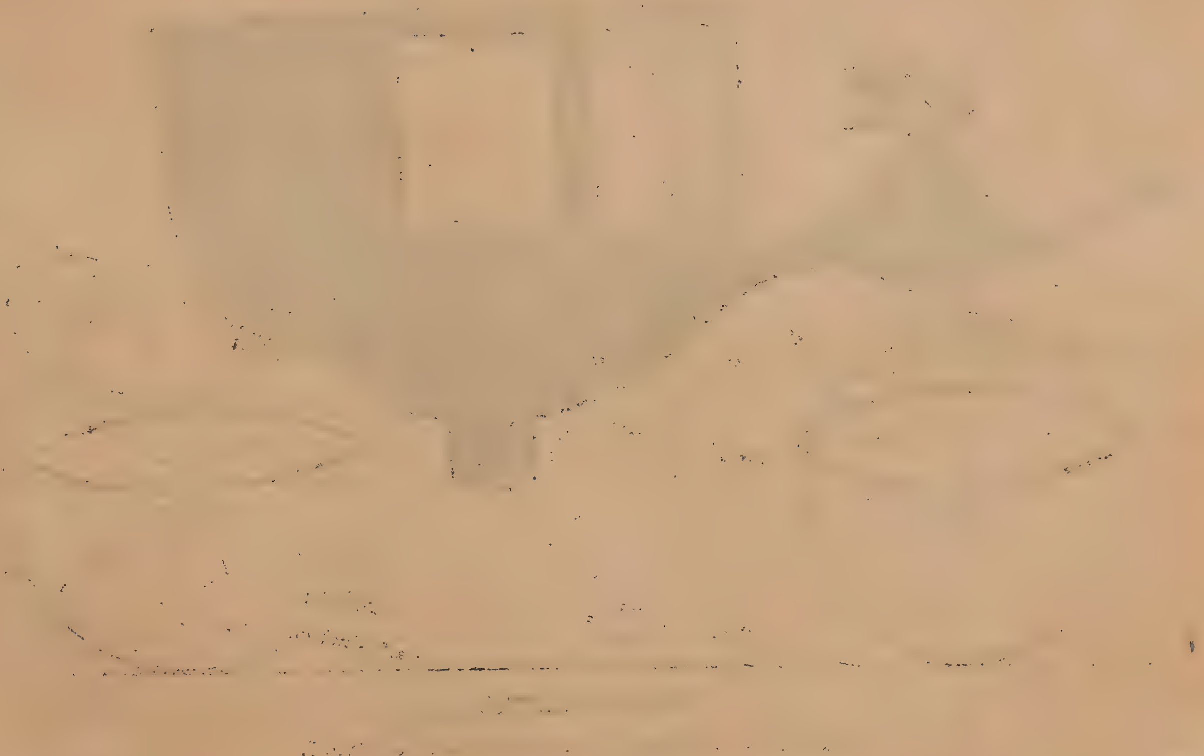
Plate No. 9.—This style of heavy carriage is at present very fashionable. It is intended for both winter and summer. For summer use the circle front is removed, and the top thrown back from the door. The dark rich colors used in the painting and trimming, the heavy circular plate glass front, gold plating and symmetrical proportions of the whole, combine to give this vehicle a rich and stately appearance, and place it at the head on the list of heavy carriages.

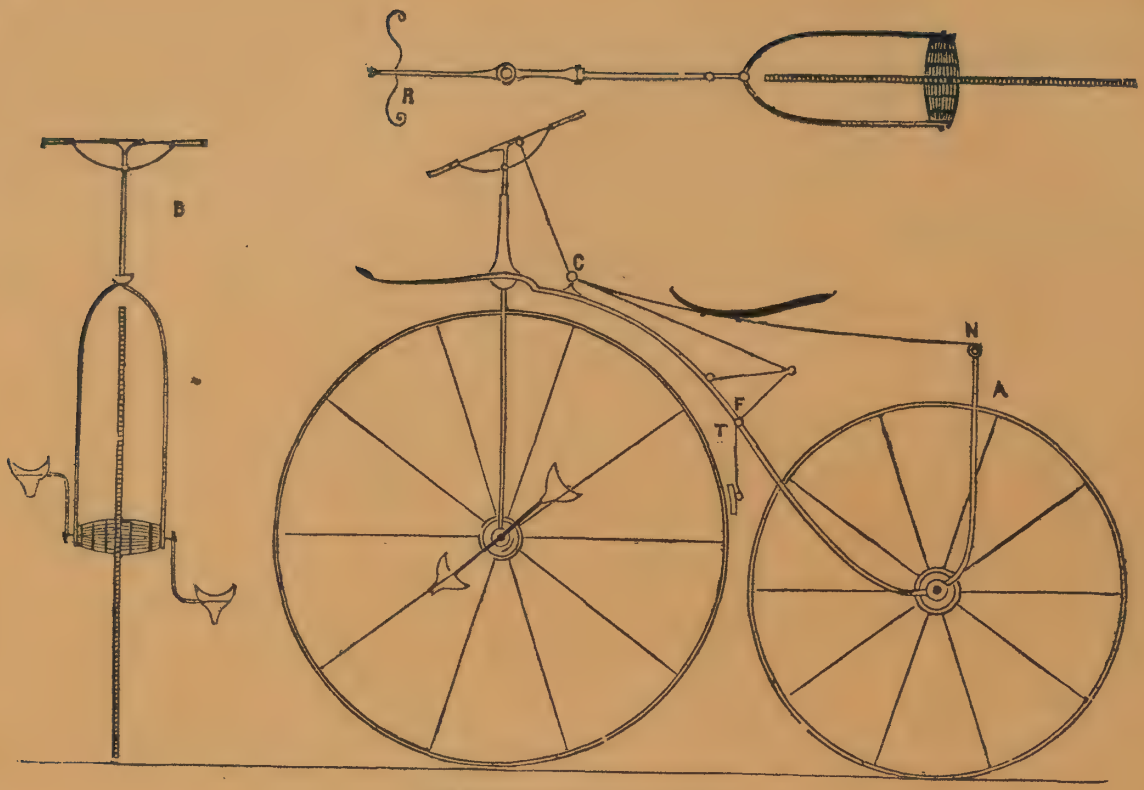
Body: 54 inches over all. Width of boot: 32 inches. Mouldings: ½ inch deep, chamfered. Hubs: 8 inches long, 4⅛ inches diameter; front band, 3¾ inches; back band, 4⅜ inches. Spokes: 1½ inches. Tire: 1⅜ by ⅜ inches. Axles: 1⅜ inches. Springs: front, 1¾ inches, 40 inches long, 5 plates, 14-inch open; back, 40 inches long, 5 plates, 1¾ inches, 11-inch open. C spring, the same number of plates, same width. These springs require heavy steel, in order to give stiffness enough for this class of carriages. Wheels: 3 feet 6 inches and 4 feet. Track: 5 feet.

Trimming: brown satin.

Painting: Body panels, dark brown, mixed with Vandyke brown and burnt sienna. Carriage to be painted black, striped with half-inch line of dark brown, centred with an eighth line of light brown, and edged with fine line of pale orange.

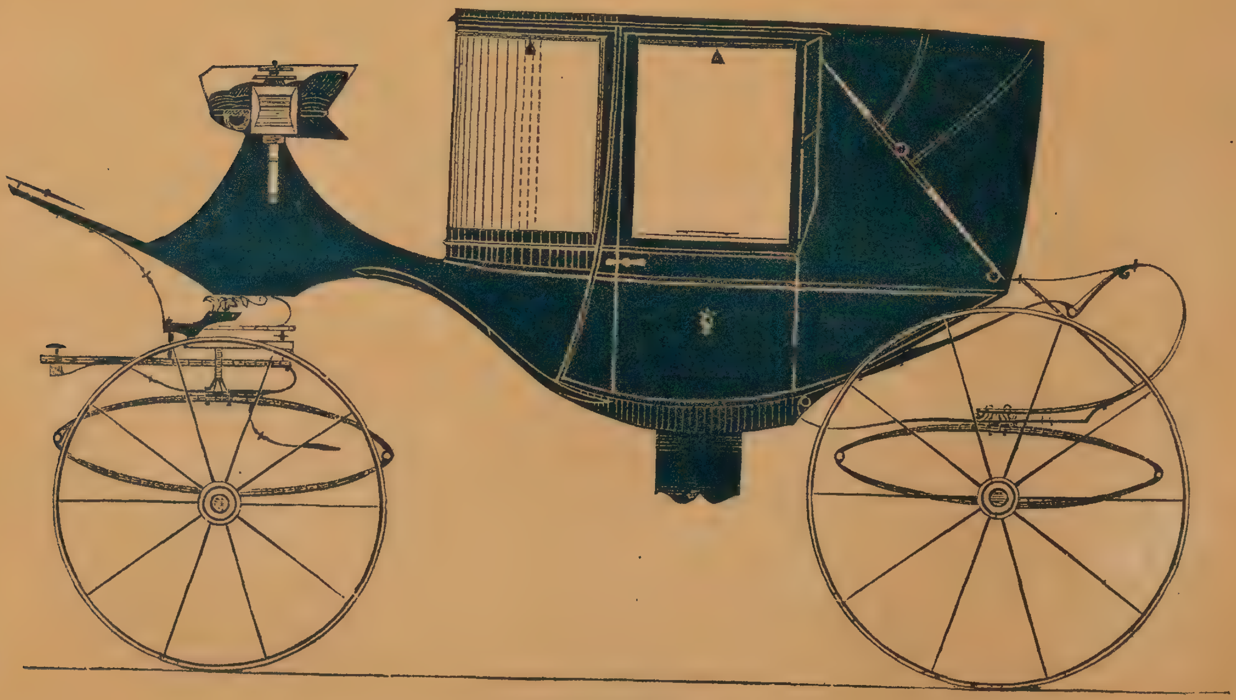






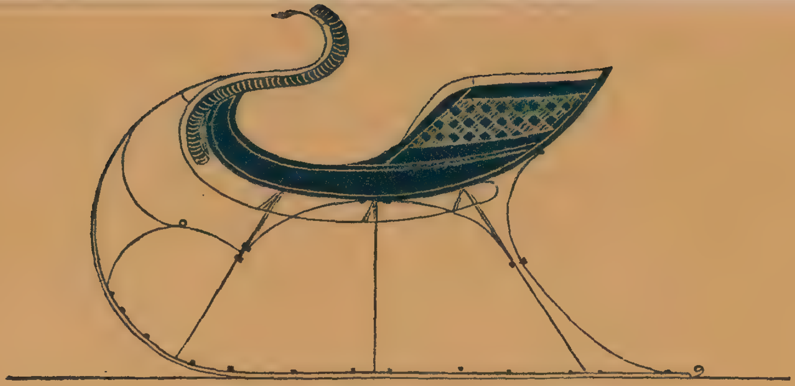
DREUZE VELOCIPEDE.

Plate No. 8.—Three-quarter inch Scale.—Explanation on Page 36.



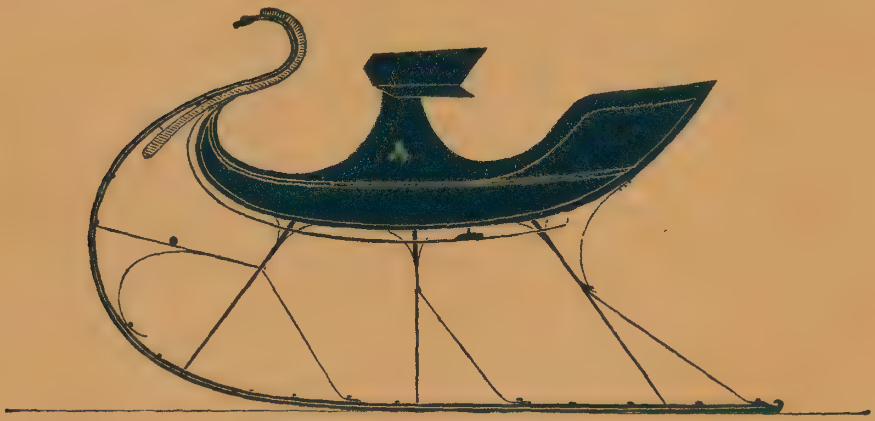
LANDAULETTE.

Plate No. 9.—Half-inch Scale.—Explanation on Page 36.



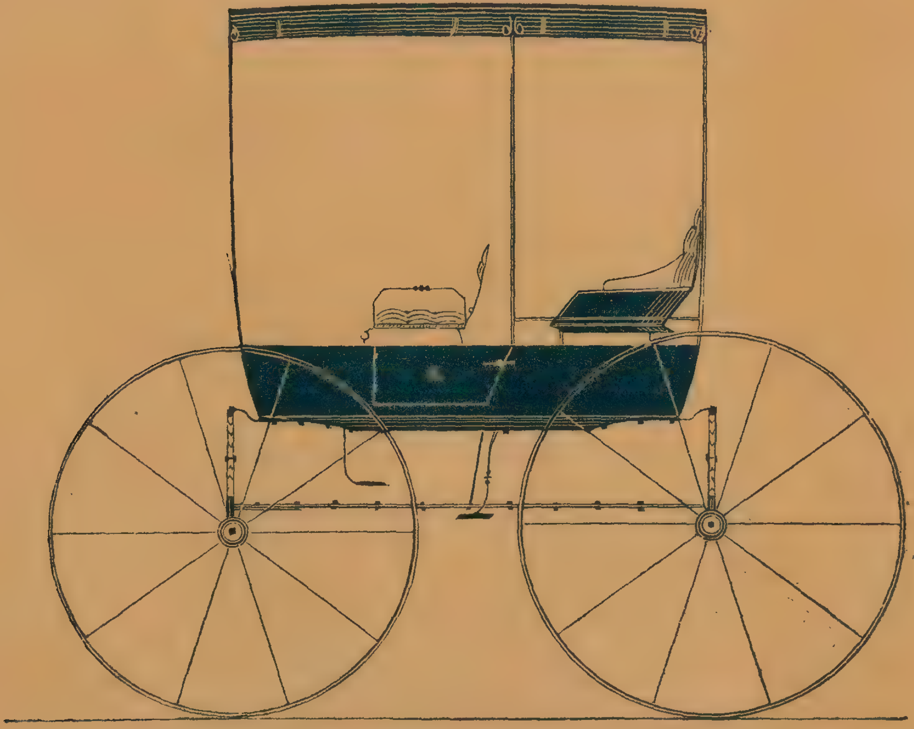
ALBANY SWELLED SIDE CUTTER.

Plate No. 10.—Half-inch Scale.—Explanation on Page 37.



SWELLED BODY SLEIGH.

Plate No 11.—Half-inch Scale —Explanation on Page 37.



CAFFREY WAGON.

Plate No. 12.—Half-inch Scale.—Explanation on Page 37.

ALBANY SWELLED SIDE CUTTER.

PLATE No. 10.—This style of sleigh, for symmetry and beauty of outline, is unsurpassed. Track: 39 inches, 30 inches on front seat.

PAINTING: lower panels ultramarine blue, striped with gold, and edged with Canary color. The upper back quarter painted imitation of cane work, or Scotch plaid. Running part painted a bright straw color, striped black and fine line of blue.

TRIMMING: reps or fancy figured Brussels.

SWELLED BODY SLEIGH.

PLATE No. 11.—The design here given recommends itself to either the city or rural manufacturer. For a cheap body the sides may be cut out of an inch plank, and, by rounding off the lower edge, will give an appearance of swell. Instead of mouldings on a cheap body, a pleasing effect may be given by running on a gay stripe, which should be of the same sweeps as represented by the mouldings. Width of seat: from 30 to 32 inches.

PAINTING: panels and seat skirt, Munich lake. The seat and running part a delicate pea green, striped with black and gold. Seat skirt edged with fine line of gold.

TRIMMING: red or green plush.

The sleigh plates here given we republish by the request of several subscribers, having published them in August and September numbers of Vol. 3. New subscribers, who have written to us lately, asking for sleigh designs, will, by this means, have the benefit of these two beauties, which have given satisfaction to those who have seen them.

The manufacture of sleighs to any extent is confined to those sections of the country where the fall of snow is not liable to be soon melted away. In the New England States, northern and western New York, in the northern part of New Jersey, and the northern part of the Western States, we find a pretty brisk trade carried on. This fall, in our visits to neighboring cities, we found a goodly number of wood-workers busy getting out sleighs for the fall and winter trade. At the West, where the snow falls in the morning, the sun shines in the afternoon, leaving nothing but sloppy roads by night, the manufacture of sleighs is a business not entered into with any zest. Few carriage manufacturers in that section care to have many on hand, and generally wait until there are indications of snow, or until the snow has fallen, before bestiring themselves to provide for the wants of the people. The sleigh, being hurried through the smith's hands, is taken to the paint shop to be finished up very often in one day, the trimmer working on it at the same time.

We trust that the winter months will give us plenty of snow, making a demand for sleighs, which helps to cheer up the manufacturers while trudging through a dull winter.

We purpose giving, in the next number, two or three new designs of buggies, intended for this, but have given place to the sleighs.

CAFFREY WAGON.

PLATE No. 12.—We take pleasure in placing before our friends this original and beautiful style of light-top wagon, kindly furnished us by Mr. Charles S. Caffrey, manufacturer of light road and track wagons, at Camden, N. J., opposite Philadelphia. The front seat turns over, forming a comfortable child's seat, also giving ample room for reaching the back seat when so required. The back seat is so constructed as to admit of being jumped forward six inches, furnishing the appearance of a single-seated vehicle. Our cut, giving only a side view, fails to do justice to this wagon. To those of our patrons who have not seen one of them on the street, we will say that, if built according to the instructions given, they will be highly pleased with it when completed.

DIMENSIONS: length of body: 4 feet 8¾ inches; width, 2 feet 11 inches; end view, the same turnunder as the side: sides, 8½ inches deep; swell, 2½ inches. Centre pillar: iron, lapped and screwed to short pillar at the bottom. The front seat to turn over front, making a child's seat when needed, and for getting in and out. Back seat is set on irons, and so constructed as to jump forward 6 inches, forming a one-seated vehicle. Hubs: 6½ inches long, 4¼ inches diameter. Front band, 3 inches; back, 3⅝ inches. Spokes: 1 1-16th inches. Tire: 1 by 3-16th inches. Axles: 1 inch, steel. Wheels: 3 feet 10½ inches and 4 feet 1 inch. Front springs: 37 inches long, 4 plates, 1½ inches, 9½-inch open; back springs, 38 inches long, 4 plates, 1½ inches, 9½-inch open.

TRIMMING: gray cloth.

PAINTING: body, black; carriage-part, black, striped with carmine.

Correspondence.

☞ We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.

For the Coach-Makers' International Journal.

BOSTON, November, 1868.

MR. EDITOR AND FELLOW-READERS.—Having formally introduced myself to you last month, over the signature of G. W. W. H., I beg leave to continue our acquaintance this number by telling you of an invention lately made which is of importance to all builders of carriages, cars, steamboats and churches, and, indeed, to any one who is accustomed either to sit or lie down, which, being very general practices, the subject should be interesting to everybody.

It is a fact deserving more than passing notice, that as demand increases so do the facilities for supplying the demand—a wise and all-important provision, without which this advancing little world, now grappling and conquering every obstacle in its way, would advance no longer, and the whole community would become stagnant and dead. Many pages might be covered in describing the workings of this principle: in showing how every great discovery and invention has been simply an offspring naturally born of the demand, and it would be found with every one—steam engine, compass, printing press, coal, telegraph, spinning-jenny, gas; with everyone the mother was necessity, and as soon as these wants had become necessities, so soon were men enabled to answer them. I was particularly impressed with this fact last week, under the following circumstances:

I had been invited by a friend to ride with him in his grand "turn-out," lately purchased, and of which he was justly proud. The day was delightful, and we had wandered off into the Newtons, which, with their quiet and beautiful retirement, present to this city the same attractions that draw forth the Parisians to the opulence of the Bois du Boulogne. The horses snuffed in the clear breeze, prancing gaily along with the proud air of entire satisfaction. The light buggy glided smoothly along over the well-kept streets, and now swung lightly around the curves of some romantic by-road. My friend was in his happiest mood, and was led to discant most affectionately upon the beauties of the new vehicle. He had just returned from New York, where he had bought it, and was fully posted upon the subject, and delighted to find some one who was interested in hearing of its fine points.

It was made by Brewster & Co., of Broom street, New York, now the leading carriage manufacturers of America, and was, in every respect, the latest and most complete in the market. Every new idea in carriage-making was practically developed, and there are many of them in this day of progress, all of which were taken advantage of, and combined after the most approved pattern.

There were two of these recent improvements which particularly caught my attention, being simple, both in idea and construction, and at the same time very valuable. I have since spent considerable time in learning all I could concerning these, and believing they are subjects which deserve the notice of every thinking mind, I desire to thus help bring them before the public notice.

The first was the new system of painting over a priming called "wood filling," an article of great value to every carriage painter, which was invented by a practical Russian gentleman, named Piotrowski, and which is manufactured by the firm of Valentine & Co., of this city. This, however, I have not as yet thoroughly investigated, so I will reserve the subject for the January number, and devote the whole of this letter to the second point, viz.: the article used in stuffing the cushion upon which I was sitting. I had noticed that it was unusually soft and elastic, and, upon inquiry, learned that it was filled with bits of sponge, prepared in a particular manner, and called "Patent Elastic Sponge."

Now sponge is a something which was always interesting to me. Its home, its character, and the means employed in obtaining it, are all curious. They have about them that smell of the sea, and look of foreignty, which are always novel and attractive.

From the tropics come the best ones, where, far down beneath the heaving of the waves, from fifty to one thousand feet below the surface, they tightly cling to the rocks and shells; and they are not all of that bee-hive or large ant-hill shape which we commonly see, but there are globular, conical and cylindrical ones; some, also, shaped like cups and tops, and some thread-like, and appearing as beautiful as the finest spun glass. Neither are they all of that dirty-brown hue which we generally see, but some are clothed in a richness of colors which competes with the gay deckments of the fishes who flash among them.

For a long time it was not known for certainty whether the sponge belonged to the animal or vegetable kingdom, but it is now referred to the latter. When taken from the water it is filled with a gelatinous substance, with a fish-like smell; and it is a curious fact, often noticed, that when cut apart, and the pieces again placed together, although not in the same relations, they will readily coalesce as closely as ever. In Greece and Turkey there are immense quantities gathered, and it is estimated that over 250,000 pounds, valued at considerably over $100,000, are annually shipped from the West Indies to England alone.

In the Mediterranean it is gathered mostly by Indian divers, who, by constant practice, become very expert, and appear as much at home in the water as upon land. Some of them are able to remain under the surface for five and even six minutes, although such cases are very rare, most divers being confined to one, one and a half, and two minutes at the longest.

In the West Indies, however, where it is larger, coarser and less valuable, most of it is obtained by means of grappling irons, and with long poles furnished at the end with hooks. To remove the animal matter, it is then necessary to bury them in the sand, where they are allowed to remain several days, after which they are soaked and washed ready for exportation.

The uses to which it has been put are various, and the amounts consumed are far beyond what most folks imagine, but now a new trade has been opened for it which foretokens to absorb more than all its other uses put together. And here is the point: curled hair and feathers have long been threatening an inability to supply the market, and various have been the endeavors to find something which might take their place, and now an article has been invented, which is not only as good but far superior to either of them, being *more elastic, cheaper, more cleanly* and *more durable.*

These are the advantages which it claims to hold over every other kind of stuffing, and, as far as I have been able to pursue my investigations, these claims have been well maintained. Concerning the first three, no one can doubt who has once seen the article, and made comparisons with hair and feathers; and, in reference to the last, I have a carriage cushion now before me which has been in use for over a year and a half, whose sponge contents still appear as full, as evenly spread, and as elastic as when new.

Through the kindness of Mr. Fowle, the Boston agent, I have been enabled to learn the following particulars concerning its manufacture. It is obtained mostly at the Bahamas, where the trade has already vastly increased, there being at present between fifty and sixty vessels constantly employed. At the manufactory, which is now at Lebanon, N. H., it is again thoroughly cleansed, torn into small pieces to enable it to be spread more easily, and is then saturated with glycerine, strongly diluted with water. The excess, being pressed out, the aqueous part of the remainder is allowed to evaporate, and the process is complete. The use of the glycerine is this: the water dilates every pore, but, when evaporated, would leave the sponge dry and hard, so the glycerine is added, which, being slightly glutinous, holds each pore open, and thus permanently maintains the elasticity.

The process is very simple, and the success attained is such that can never be rightly estimated by one until he has practically demonstrated it by riding all day in a steam car whose cushions are stuffed with it, or by lying upon it through long and tiresome weeks of illness.

Yours, &c., JUNIUS.

For the Coach-Makers' International Journal.

PAINTING FLOWERS IN MINIATURE.

BY J. H. T.

Continued from page 21.

SNOW DROP.—Cover and finish as for a lily; do the seed with yellow, and shade with umber; let the green be dark.

TULIPS.—There being a great number of sorts of tulips, I shall omit many of them, especially the plain ones, which may be done by directions given elsewhere for other flowers, for the making of particular colors, and only touch upon those called striped or streaked tulips.

These stripes, or streaks, are laid in with carmine, very thin in some places and very deep in others, and are to be finished with fine strokes of the same color, which all must observe, at the turn of the stripes. As for others, you may begin with vermilion, and proceed with mixing it in with carmine, and finish with carmine only. For others lay blue upon vermilion instead of carmine.

Some, again, you may color with lake and carmine mixed together; and lake only, or with white, to begin with. Those of a violet color are to be done with ultramarine blue and carmine or lake, sometimes bluer and sometimes redder. The manner of doing them is just the same, there is no difference, but in the colors.

A blue made of ultramarine and white, and sometimes a transparent purple, is to be put on in certain places; as for example, between the stripes of vermilion, carmine or lake, which must be finished with fine hair strokes like the rest and scrumbled into the stripes.

Those tulips that have fallow taints, are made of lake and ochre according as they happen to be; but these are only for fine or uncommon kinds. Shade such, whose stripes are carmine, with blue and black. Such as are colored lake, shade black and white, and sometimes mixing in green.

Those tulips, which are called edged, are all of one color, except the border, which is white and purple. Lay the purple tulip of this bordered sort with ultramarine, carmine and white, and shade and finish with the same. You must not touch the border, that is, you must only lay on a thin white, and shade it with a very thin mixture of blue and black.

Color yellow tulips with yellow, shade them with yellow ochre and umber, do the edging with vermilion, and finish with a little carmine.

Red tulips are laid in with vermilion, and finish with the same color, with a little carmine or lake added to it; do the border with yellow, and finish it by adding a little umber.

White tulips must be shaded with black, blue and white; edge these with carmine.

There is in all these sorts of tulips a nerve in the middle of the leaves, which must be made brighter than the rest, and the edges must be scumbled into the grounds by fine strokes, for they must not seem cut or separated from the rest. There are others still of different colors, but I have given all that is necessary.

The leaves and stalks of tulips are commonly painted of a sea green, with broad strokes along the leaves. Some, again, may be colored with black mixed with masticot, shaded with chrome green, that they may have a good cast.

Having shown what colors to use and the manner of laying them into some of the principal flowers, I will close these papers by giving a few examples in painting fruit.

APPLES.—Color with a thin masticot mixed with verdigris; shade with brown ochre, and give these blush tint with a thin or deep lake, and heightened with white. If you would have them high-colored, mix your white with some masticot; but this must be according to the condition of the fruit, whether ripe or unripe, red, yellow, green, &c.

CHERRIES.—With vermilion and yellow; shade with lake; heighten with vermilion, mixed with white.

Heart Cherries.—Color in the middle with vermilion and lake mixed with white, the circumference remaining whitish, here and there sweetening them with lake, and heightening with white, mixed with a little lake.

GRAPES.—*Blue Grapes.*—Color with purple, shaded with blue, and heightened with white.

White Grapes.—Color with thin verdigris, which is called Spanish green, mixed with masticot; shadow with thin verdigris, and heighten with masticot mixed with white.

PEACHES.—Color them with masticot, shaded with brown ochre; give them a blush with lake.

PLUMS.—*Blue.*—Color with purple, shaded with ultramarine, and about the stalks with a little green, well sweetened; heighten with purple and white.

White Plums.—Do over with masticot, shaded with brown ochre, and give them a blush with lake, heightened with white.

MELONS.—*Yellow Melons.*—Color with yellow, shaded with brown ochre, the veins with stronger brown ochre, and then heighten with white.

Green Melons.—Work with blue mixed with verdigris and sap green; sweeten the one with the other, and shaded with dark green, but the whole fruit with brown ochre; lay the specks with red and black to the life.

PEARS.—Lay over with masticot, shaded with brown ochre, and give them a blush tint with a thin deep lake, and heighten with white.

CUCUMBER.—Color the ends with a thin yellow, the middle with green, sweetening the one with the other, and shading with sap green, but the whole fruit with brown ochre; lay the specks with red and black.

RADISHES.—Work them over with white, shaded with lake and sweetened, as it were, behind with purple, and sometimes with green from top downwards. Lay the green leaves at the top with verdigris mixed with green, shaded a little darker, and heightened with masticot.

STRAWBERRIES.—Lay them over with a white ground, and draw that over with very thin vermilion; shade it with fine lake, and heighten with masticot mixed with minium, and then with white; only speck them with lake by, the side of which put a smaller speck of white.

I have given a good variety to study from, but the new beginner should use some judgment himself, placing his flowers in every position to get the best effect, and also having a variety; he can sometimes find variety even in a single flower.

To show the beauty of variety, I will instance in a gelder rose, which is a white flower, but having many leaves, one under the other, and laying hollow, so as to be seen through in some places, which occasions several tints of light and shadow; and, together with these, some of the leaves having a greenish tint, all together produces that variety which gives a beauty not to be found in this paper; nor the inside of an egg shell which is whiter, nor any other white object that has not that variety.

This is the case, though this flower be seen in a room, in gloomy or wet weather; but let it be exposed to the open air, when the sky is serene, the blue that those leaves, or parts of leaves that lie open to it, will receive, together with the reflections that will also happen to strike it, will give a great addition to its beauty.

But let the sun-beams touch up its leaves, where they can reach with their fine yellowish tint, the other retaining their sky blue, together with the shadows and brisk reflections it will then receive, and then you will see what a perfection of beauty it will have; not only because the colors are more pleasing, but there is greater variety.

Work after natural flowers; persevere; do not be discouraged after a few trials, and, my word for it, you will soon be able to take another step higher up, and at some future day, perhaps the COACH-MAKERS' JOURNAL will chronicle that Mr. ——, formerly of Mr. ——— carriage shop, has opened a studio in the Academy Buildings, and is now on two historical pieces which he soon will present to the public.

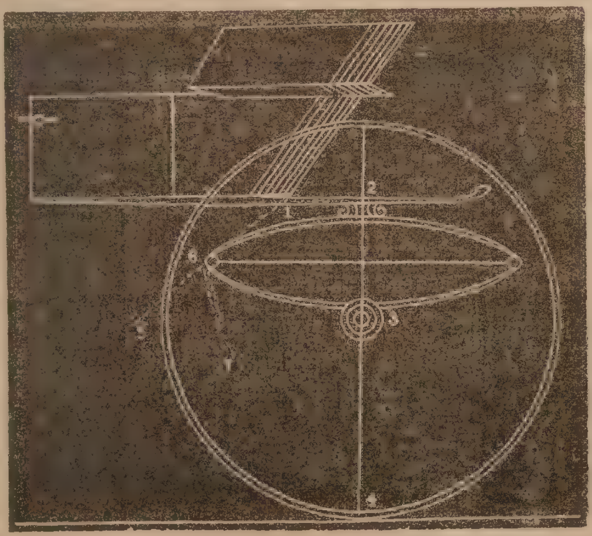
* * *

For the Coach-Makers' International Journal.

RAVENNO, PORTAGE CO., O, Nov., 1868.

MR. EDITOR:—Our trade is unlike many other mechanical trades; in that, while the cabinet-maker is ever so tasty and stylish, he has not to study strength in any particular part, but simply "style" to please the eye. He makes his piece to stand in the room to be looked at, and not for hard work; while we must study to please, and also have our work symmetrical and stylish, and also constructed to do hard work—We must have strength in the inward parts. If we build carriages to stand still to be looked at merely, we would have comparatively an easy task, but to be stylish, tasty, strong, all in their proper place, is no easy matter. Then the object of this scratch is to give an idea, and then ask a question or two, hoping thereby to elicit information, and also as having an important bearing upon the subject of spring bearings, which I intend to have something to say about at some future time.

It is customary now-a-days to hang our work on eliptics behind, and that too, without any support to the front end of the springs; which, by the by, is not commendable: but so it is. Now where do we want strength to support our body and load when running on the road at the rate of six miles an hour. We will suppose a six-passenger phæton. The body will weigh 200 pounds at least, when ready to hang up The passengers will weigh 750 pounds, or we will put the weight at 1000 pounds, perpendicular weight.



At point 1 is where the loop leaves the body; 2 is where the loop crosses the spring bar; 3, centre of axle, and bearing of spring on axle; 4, the wheel on the ground, and also the point of resistance when the carriage is in motion. Now take this figure at 1, 2 and 4, it is a lever with two arms and one centre, the centre at 2, a short arm from 2 to 1; and a long arm from 2 to 4. The power acting on the short arm is the weight of body and passenger; that acting on the long arm is the resistance on the road when the carriage is in motion, to which, I think, may be added the weight of front carriage, hind carriage, body, passenger, and all. The weight acting at 1 is 1000 pounds; that acting at 4 is, how much? equal to the power that it takes to draw the carriage, and also take into consideration the roughness on the road, and all other hinderance that may be met with in its progress, how much is it?

If we hang a carriage on eleptics without a support to the front end of the springs, all this power will act on the loop, between figures 1 and 2, and if not strong enough, the loop will bend here or break, and let the body down in the direction of dotted lines, from 1 to 5, and the front end of spring will come down in the direction of dotted lines, from 6 to 7.

To prevent this, sufficient strength must be given to the loop, from 1 to 2, and firmly fastened on the spring at 2; these points must be very heavy and strong to bear the weight and resisttance. To obviate this great strength and weight here, give a support to the front end of springs, or use three quarter springs. Perhaps our friend Harper, of Illinois, can throw some light on this draft and weight. Yours, truly,

EAST AND WEST.

* * *

For the Coach-Makers' International Journal.

THREADS FROM THE MEMORY OF AN OLD CUSHION.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER I.

MUSING—NOT AMUSING.

Ah, well! here I am, thrown away in a corner, useless; declared to be played out by that red headed brute of a trimmer. I wish I had even a button in me, I'd throw it at him; but, alas, I am not worth even a button—I must bear his insult in silence. Well, well, 'twas not always so, but I have got used to rough usage of late years. I suppose now, without being egotistical, that I have had as strange and adventurous an existence as any "other cushion" that ever had a *button* in it. The queer places I *have* seen, and the odd corners I've found myself in to be sure; and then the adventures, the ups and downs I've gone through, the people who have sat on me, and whom I have seen on my mate, (I wonder where my mate is now) would make a pretty good novel if it could only be written; but I can't do it—yet perhaps that nice young man who used to sit on me at dinner time while he stuffed himself and read the papers, (the stuffing is all out of me long ago,) might understand me. I'll give him my history before I am *swept* out of existence by that "red head." There's another kick out of his way. He says he'll sweep me out in the morning. Oh, my, how different!

Well, I can remember the day we were finished; there were two of us. How proud that trimmer was of us I heard him say we were the best cushions he ever made, and we so thought. We were made for a beautiful top buggy, to be exhibited at —— State Fair; he got twenty dollars extra pay for trimming the job, at least I heard the boss say so to the man who bought us; we were what the "bowery boy" might call gallus.

How our faces (I mean fronts) shone in the sunlight as we lay on the seat; how the ladies admired us, and when they said "Oh, dear, what beautiful cushions!" we were very proud, especially when the judges decided that we were the winners of the prize. It's a wonder we didn't burst with pride; in fact, a button did pop out of me. How we looked down on the "fall" as one beneath us; truly, we thought ourselves above him. How our new buttons glistened and shone—bright like the eyes of the beautiful lady who was to be our owner. How straight our backs and sides were; no "Grecian bend" on us. Then we were elastic in our youth; we felt elastic and springy in our newness, *although not made with springs.* Oh, my poor broken sides! Another kick from that "red hog;" that's the last of me; he knocked a big hole in my bottom that time. Oh! to think of the difference between now and when we were first brought into existence! Then we were carefully covered with new muslin—not a speck of dirt allowed on us; now I am covered with nothing, except it may be dirt and grease and moths. How I hate moths; they destroy one's beauty so soon. I believe they are *cushion consumption.* How neat my front was then, with its pretty ornaments in white pearly stitchings: and my sides and back, beautiful and smooth and plump; now they are bent and torn and ripped. And my bottom, it was made of nice shiny stuff, and looked so clean and smooth that when I was turned over to keep my top from getting wet, I heard "our young lady" say I was good and nice enough to sit on even wrong side up. "Our young lady!" I will have to tell you more about her, the poor, dear lamb! How she did like to go buggy riding and sit on me, and I used to like it, for I was the left hand cushion, and as I was used by the lady there was usually more care taken to keep me clean and well brushed; and that's one reason why I am so sensitive and retain my pride even to-day, when I retain nothing else.

There's a great deal more resemblance between a cushion and a man, than any thoughtless person would at first imagine. Now, when they are young and fresh and good-looking, they are cared for and looked after, but when they get shabby and hard and old, they are carelessly used—shoved in a corner, and, finally, as in my case, to-morrow swept away—when their usefulness is gone. Those who ought to love them for their former services, are only too glad to get rid of them. But there I go. "Old and garrulous" is a saying—and I suppose I am like all old folks.

But I don't intend to moralize: I intend to tell my history—only I got a little mad at that "fellow" for kicking me about so. I bet a—(I 'aint got anything to bet—I'm smashed)—that he can't make one like I was. But my history—it is a curious one—and I do not want any one, especially you, Mr. "FRED PUMICE," to think that I tell lies, or exaggerate. Although things I will tell you may appear strange to you and your readers of that "COACHMAKERS' JOURNAL" I hear so much of, remember what your friend Shakspeare wrote—that there were "stranger things in heaven and earth," &c. So with my adventures: they may appear impossible, yet as the policeman explained to the justice, I will explain to you. But you don't know the story. A policeman brought a woman before his Honor for stealing some articles of household economy. Said the Judge—"Well, policeman, what's the charge? 'Stealing, your Honor?' "Well, my good woman, what have you to say to the charge?" Nothink, your Honor, only I didn't." "Policeman, did you say you saw her take these things?" "No, your Honor; but when I arrested her, she swallowed two pairs of blankets, an overcoat, a woolen shawl and a pair of smoothing irons." "Come, come, sir," said his Honor, "I will commit you for contempt. Do you come here and expect any one to believe such a ridiculous story as that? I'll have you broke, my man." "Oh! your Honor," said the frightened peeler, "I mean she swallowed the tickets of them, for she had pawned 'em." Do you see the point, Mr. Pumice? Things that may appear impossible are not so. So, when you come down to stuff yourselves to-morrow, I will be ready for you.

Now, Mr. W., I am very sorry my friend, the "old cushion," did not keep on, yet I cannot see how to help it. If I wait till to-morrow, I will be too late for the mail, and the JOURNAL will be too late for its readers. So this must go as the introduction of the old squashed, and in my next we will do better—when some of the "*threads*" will be unraveled.

For the Coach-Makers' International Journal.

MECHANICAL POWER.

BUTLER, ILL., Nov., 1868.

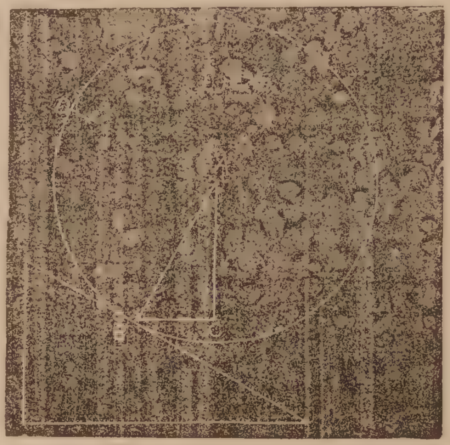
"It affords me great pleasure to see how Mr. Harper drops the subject of the *bent* lever, since the appearance of my short article in the JOURNAL of April. He magnanimously changes his base." Such are the exultant words of Prof. Easterday, page 222, Vol. 3, of the JOURNAL, to an article from me that appeared in the March number of the same Vol.

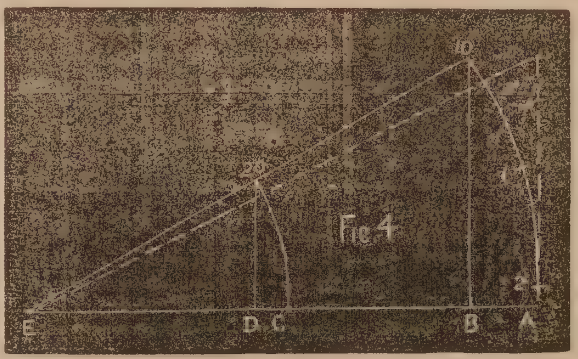
It is an undeniable fact "Mr Harper" has changed his base, and that the Prof.'s strictures on that article were the true orthodox principles of philosophy laid down in the books, and perhaps never seriously doubted by any individual, after giving it a thorough consideration.

On the next page (223) the Prof. illustrates the necessity that would excuse me for making a feint theory in mechanical philosophy, *in order to make him admit the true theory* He cannot comprehend that a plain unpretending workingman can see facts like a Prof. So he egotistically tells the workingman or smith, that in order to measure a tire correctly that he is going to fit to a wagon wheel, the hand wheel must make two more revolutions on the wood work of the wheel than on the inside of the tire that will fit it. Now, there is not a single man that ever fitted a tire, but what knows this professionally scientific man made a most egregious blunder. But why should he do so? First, he had good authority of scientific professors for it, which, to his thinking, is all in all. Second, he had a good chance of contradicting me, which he makes a part of his duty to the public.

It has been my fortune, or misfortune, to be excluded from scientific papers many times, because I would not admit that the philosophy of mechanical gain in power was due to, or derived from an increase of motion. The fact in the case was first forced on my mind by demonstrations in trying the draught of wagons, and has since been submitted to some of our most scientific men, who have admitted the demonstrations to be genuine in every case. (Prof. E. will be the first exception, if he is counted in that class.) Carriage and wagon manufacturers, who are pre-eminently responsible, shape the most important part of their business transactions in accordance with that demonstration, and warrant their vehicles to have a greater power of locomotion than it was previously supposed in science to attain. The fact exists, and we want to know why it is so; then we shall be beholden to no one for endorsing the fact. Now we propose as the first act after getting the true principles of philosophy from the Prof., and after changing our base, so that he cannot deny them, to show why it is so by the rules of his own reasoning, and not let him be a stumbling block to those who would otherwise be benefitted by the discovery.

Figure 5 represents an inclined plane of 30 degrees, with a wheel 60 inches in diameter, being drawn in the direction of A D, parallel with the incline. The Professor truly says that the line A B is the long arm, and B C is the short arm of a lever that lifts the load up the inclined plane. The height of the incline of 30 degrees is one to two of its length, and the power of the lever, or the proportion of the arms will always be equivalent to the height and length, let that be what it will. Ten pounds of power at A, in the direction of D, will be an exact equivalent to 20 pounds, that falls in the line of A C. Now we are to suppose a wheel of this size is held in exact equilibrium on such an incline, and that we apply enough power in the direction of A D to overcome the equilibrium, which, as a matter of course, after throwing out of count friction, is no more than the power necessary to throw evenly balanced scales off from an equilibrium; the result will be a motion of the wheel up the incline. Let it continue this motion until the axis A has turned the tread of the wheel 30 degrees on the incline, and then calculate the space that it has traversed.





This is done by multiplying the diameter of the wheel, (60 inches,) by 3.1416, and dividing the product by 12, which gives the length of the arc of the circle, contained in 30 degrees. This will show the circumference contained in the arc to be 15.708 inches. So much as this amounts to, so much of the inclined plane the wheel traverses, and the vertical height the wheel rises, is one-half the length that it traverses on the incline; which, in this case, amounts to 7.854 inches.

Now in contrast with this, compare the proportions of the straight lever, figure 4, in which we call the long arm 30 inches from E to 10, and the short arm 15 inches from E to 20, which makes the power as two to one. Raise the long arm from A to 10, which is 30 degrees, and it will move through a space of 15.708 inches, while the short arm rises through the vertical space from D to 20, which is only 7.500 inches.

It will be seen by this, that the lever of the wheel in moving a little less than 16 inches on the inclined plane, raises the weight over one-sixth of an inch higher than the straight lever does with the same power. In one revolution of the wheel, it would raise it 2.124 inches higher than could be done with a straight lever, and precisely the same power.

Now these are mathematical conclusions, based on Prof. E's own base of philosophy, (which is correct,) that has "afforded him so much pleasure" in forcing me to take. But how does his argument of veracity stand, which he curtly volunteers and repeats, in relation to my failure to demonstrate these facts, which mathematics prove must have been demonstrated under the circumstances? For fear of personalities I will not discuss this part of his argument, but as the case stands I shall not feel sensitive to his attempt to impeach my veracity on the strength of his own, or jealous of his practical attainment, when he shows it by fitting tires to wheels.

As for the old theory in science, that the philosophy of gain in power was to be attributed to an increase of motion of the propelling power, or initial power, it is *certainly untrue*, and as a matter of consequence, all those supposed mechanical powers that depend on that reasoning for being so classed, are wrongly classed. The discovery was made in testing the draught of wagons, and since that time has been of great benefit to the manufacturer, and still greater to the consumer. The most profound treatises on mechanical science, say that we seldom reduce the friction of machinery to less than one-third of the power. It is a common occurrence to reduce the friction of wagons to a one-hundredth part of the power, or, in other words, to draw 100 pound load on a level with one pound draught. Such a carriage or wagon will never wear the axles so as to injure them, or heat when properly greased.

If one can be made with that ease of draught, THERE IS A REASON WHY IT IS SO; get hold of that reason, and it will be as easy to make every one so, as it is to measure two feet with a proper rule. There is no reasonable excuse at the present day for manufacturers entailing on the community a hard running wagon or carriage, and it does not require the spirit of prophesy to foretell the ultimate result of even the most prosperous manufacturers, who have grown up by what is termed good business tact, yet who persistently neglect the principles of science in their wagons and carriages.

Science is onward in its march, and truth will steadily force its way against error, even to the sacrifice of fortune of those who think their shrewdness is a substitute for it.

HENRY HARPER.

For the Coach-Makers' International Journal.

MR. EDITOR:—Being a constant student of our friend, the COACH-MAKERS' JOURNAL, and as I belong to the give as well as take family, and as we ought to contribute our ideas as well as our money, and thus add to our mutual benefit, I will offer an idea which I think is good, but have never seen practiced any where in my travels.

In a number of the last volume, you gave the best plan that I have ever met with for finding the location of the knuckles on a buggy top. I propose to give my plan to furnish the smith with a convenient, reliable draft, or pattern, to make the joints by.

Take an inch board, say 1 foot wide, and 5 feet long, and 2 feet from one end of the board, and 4 inches from the side, insert an iron pin just the diameter you wish the eye of the joint, and 2 inches long. On one end of the board, and 32 inches from this pin, and 4 inches from the edge of the board, cut a slot $\frac{5}{8}$ of an inch wide, and 6 inches long, and at the other end of the board cut a similar slot 22 inches from the pin.

In each slot put a pin of the same diameter as the first, with a shoulder on it; top to rest on the side of board, and a thumbscrew for the bottom side. These pins should be tapered at the point. Now, take a straight edge and square, and obtain the length of the long joint on the right side of the top, adding say ¼ or ⅜ of an inch to the length so obtained; then place the end of straight edge against the stationary pin, and move the adjustable pin up to the square; screw fast with the thumbscrew, and you now have an exact and permanent draft of the long joint. On the opposite end of the board you can draft the short joint. Upon the opposite of the board you can arrange similar pins and slots, and thus have a draft for the whole set of joints at once, and the ironer will know when he has the joints just according to order without further trial. The knuckles can also be located according to the mode referred to, and the shape of the joints chalked out.

Now, fellow craftsmen, if this is better than peeping after the tacks drove in the board, or any other plan that you may have, you have learned something; but if you have a better plan, don't keep it to yourself, and laugh at this, but let us have it, and then I will learn something.

This method may seem lengthy and complicated, as most descriptions or explanations usually do; but you will find upon trial that it takes longer to write out the plan than to execute it. C.

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For the Coach-Makers' International Journal.

A WORD ON PLUGS AND BRADS.

Wyoming County, New York.

In plugging screw holes we glue the edge of the plug; put no glue in the hole. By this means, the surplus glue is left on the surface, and if the plug does not hit the screw it will seldom show. We set the head of brads well in, then pass a sponge of hot water over them, filling the holes with hot water. This brings the wood more to its natural position, and closes, by degrees, over the head of the brad. When dry, sandpaper off and paint, and the putty will not hit the head of the brad; if it does, it will surely show bad. The brad must have a chance to expand when exposed to the heat of the sun, and not hit the putty; If it does it will force the putty out. We have had no trouble with brad heads or plugs since we adopted this practice. S. N.

P. S—We have taken the *Egyptian Magazine* for a number of years past, and verily believe we have derived more real benefit from one number of your Journal than we ever received from that.

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For the Coach-Makers' International Journal.

BURIED ALIVE.

While memory lasts and is directed by reason, I will never forget the horrors of that fearful hour in which I was entombed in a subterranean city of the dead.

Having for several years attended too closely to mercantile pursuits—devoting from twelve to fifteen hours, on an average each day, to the duties of the office—I found, at the expiration of fifteen years, while I had amassed a fortune, I had, in the meantime, shattered a once powerful constitution. I married at the age of twenty-eight, enjoying the society of a loving and devoted wife during ten years. But death severed the earthly tie that bound us together, and I confess I have never been fully reconciled to the separation. We followed three promising children to their narrow resting places in the quiet church yard, and but one remained—a boy of nine years.

At the age of forty-five, broken down in health, I retired from business, and concluded to travel in foreign lands in quest of health. My son having arrived at the age of sixteen, was pursuing his studies at —— college, giving promise of a life of usefulness. He had chosen the ministry as his profession, and as several years would elapse ere he would be fitted for his high calling, I perfected arrangements for an extensive tour in the old world. Having placed my son in charge of an old and highly esteemed friend, I engaged passage on the steamer Baltic, and, on April 11th, 18—, I bade farewell to New York and all that I held dear. We had fine weather during the voyage to Liverpool, and with the exception of slight sea-sickness, my health appeared to improve from the moment I began to breathe the pure, bracing sea air. On the eleventh day out, we were safely landed in Liverpool. A stranger in a strange land, thought I, as I mingled with the crowd who were hastening to place their feet once more upon the solid earth, after having been rocked on the bosom of the great deep, and, as it were, cast out as worthless on the waste of waters.

After taking a hasty look at Liverpool, I pushed on towards London, anxious to see that great city. After a ride of about two hundred miles by rail, through a section of country well improved, with many attractive features to a stranger, we arrived at the famous city of London. But I must not dwell on the beauties of landscape, the sublime grandeur of ocean caves, the ruins of old castles, or the resting places of illustrious dead. Suffice it to say, I visited the principal points of interest in England, Ireland and Scotland. Crossing over to France, I spent some time in Paris, from thence to Lyons and then to Italy. At Rome, the eternal city, I beheld that wonder of architecture—the Church of St. Peter. As I called to mind the name of Michael Angelo, my own nothingness was oppressive to me. I wandered enchanted through the halls of the Vatican, gazing spell-bound at the wonderful productions of the masters, who, though now in the cold embrace of death, inspired the living with a new life as they attempt to drink in their mighty conceptions. The Coliseum, the Pantheon, the Obelisks, the Triumphal Arches, &c., &c., were visited.

I will here pass over much that might be interesting to the reader in my further travels, and ask you to imagine yourself with me in Egypt. We will not stop to comment on the ruins of the once magnificent cities of Thebes, Memphis, Heliopolis and Alexandria, Lake Moeris or the Pyramids—but descend with me into the Catacombs. There were five of us, beside the guide, who entered this subterranean city of the dead. We wended our way through gallery and passage, pausing from time to time to decipher an inscription or inspect a quaint tomb. On entering I experienced a chilly and sickening sensation. After a time I felt an irresistible desire to push ahead and explore for myself. Despite the entreaties of the guide and the pleadings of my companions, I turned aside into a passage to the right, promising to spend only a few moments, then return and overtake them. I had taken but a few steps forward when I felt the earth crumbling beneath my feet. Before I could recover my self-possession I found myself rapidly descending into some dark pit, the depth of which I could form no idea. Loose earth and rubbish caved in on me, extinguishing my torch and leaving me in total darkness. O! the dread agony of that hour. I was insensible for some time, but, on reason returning, I found I was buried alive amid the dead of centuries. Superhuman strength must have been given me, for, bruised, hungry and thirsty, I attempted to extricate myself, which I accomplished after great exertion. I received no serious injuries, my fall not being so great as I had pictured it, through horror of the place. What can I now do to save myself from starvation! I became frantic; I shouted, and the sound of my voice rang through the vaults and echoed back as if in mockery. Overcome by my exertions, imagination was quickened, and I beheld home, my darling boy, friends, and the past, as if in a blaze of light, passing before my mind, as I sank down insensible. On awakening I thought I saw a faint light in front of me, but apparently a hundred feet away. I soon discovered that a gallery led into the pit where I was. The light moved towards me. I called for help, but received no answer; in the next instant the light had disappeared. After a few moments I imagined I saw a faint glimmer—but all was total darkness. Lost! lost!—my beloved child, farewell! Kind Heaven have mercy on me—I die alone. Suddenly a bright light flashed into my dungeon, and a kingly form stood before me, demanding of me who I was. I tremblingly related my history. When I had concluded, he said: "Follow me out of this place; take this torch and grasp this thread, which will lead you the entrance of the tombs; and when you arrive at home, say to a *certain publisher of Egyptian and Assyrian carriages*—let our ashes rest in peace."

Mummy.

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For the Coach-Makers' International Journal.

Rahway, N. J., November, 1868.

Mr. Editor and Fellow-Readers:—In perusing your valuable Journal for November my attention was attracted by the remarks of our Boston tramper, G W. W. H.

The interest manifested by him in its success I highly commend, and the course he has adopted cannot, if properly pursued, fail of bestowing that aid and assistance to it of which he seems desirous.

But it occurs to my mind, as we are not all of us gifted in the art of writing so as to please, that there exists a still better plan which we can adopt, and one which will prove of more benefit to the Journal than that adopted by the gentleman, praiseworthy as his is, and that is this: to energetically canvass for an increase of subscribers, and "toss in our driblets," at $2 apiece.

Urged on by this thought, I concluded to act as club agent in this flourishing little city, and in less than two months have forwarded to headquarters the names of over thirty subscribers, contributing the small sum of $60, and intend to keep on increasing the number to the end of Vol. IV, and I think that "driblets" of this description will go as far toward sustaining the Journal as the contributions of the gentleman who confesses that he is in that unfortunate state, with relation to the fair sex, of having "no one to love, none to caress him."

In fact, what could be accomplished in this direction by an energetic person with the time to devote and the field to operate in, would prove really astonishing, and the heart of our worthy editor would swell with joy when he heard from *such* "trampers" with *such* "driblets."

I myself, though I would not presume to compete with our Bostonian "tramper" in writing articles, will, nevertheless, stand him a wager of a dozen of Grant's best segars that in the first quarter, or in the first three numbers, I will show on the books more subscribers at $2 ahead than he, or I will wager any young married man who prides himself in having an agreeable and intelligent companion for life, and as bright-eyed a little boy as I, a bound volume of of the 2d and 3d volumes of this Journal at $5.50, that I will show on its books a hundred subscribers, and leave to Mr. Ware to decide who wins.

Will any carriage-maker accept this? If so, let him address me, through the Journal, or send to C. E. W., Box 250, Rahway Post Office, New Jersey.

Hoping that a spirit of emulation in this work may be aroused in the fraternity, and that this Journal will go on increasing its subscribers and meet with the glorious success it deserves, and that our Boston friend will edify us with his literary contributions and enlarge this paper's circulation by accepting my wager, I remain your earnest co-worker, Chas. E. Ward.

Pencil, Rule & Square.

D. BOARD, EDITOR.

MANNER OF MAKING PATTERNS.

PART SECOND, (CONTINUED.)

BY A PRACTICAL CARRIAGE ARCHITECT.

(See front of Journal.)

We left the last diagram with the patterns complete, excepting the standing pillar, roof or cant rail, and curve patterns. We will, before applying the Square Rule, finish our patterns. You will now proceed to lay out for the making the standing or door-pillar pattern. It will require a panel 5¼ inches wide, laid upon the draft board perpendicular. You will mark the shoulders at the roof rail, bottom side, and the extreme depth of the body on base line A. You will proceed and lay off the turn-under, which is 4½ inches, commencing the sweep about 4 inches above the arm rail. Leave the pillar ¾ of an inch deep at the bottom for the tenon, on base line A; at the guide rail, 2¼ inches; at the shoulders of roof rail, 1⅝ inches. Now you can space it off for the glass frame, and sweep the pattern as represented in the diagram. C represents the face of the bottom side, being 1¼ inches from the face of the pillar, to allow room for bolting the step after the door is cut through to the bottom.

Fig. 1 represents the roof-rail pattern. You require a panel 7 inches wide for this pattern. We lay it underneath the draft board for convenience in this case. Square the perpendicular lines N H B and F across it. Now take the distance with your dividers from the perpendicular line C to line B. With this space you will place one point on line E, at the perpendicular line B, and prick it off, the same distance from line E on line H; these points being the outside of the roof rail at the standing pillars. Now place the back and front pillars in their proper places. Before we can decide on the sweep of the roof rail, mark off 1⅞ inches, being the width of the pillar at the top, on lines N and F, from line E. Now you can sweep as represented in the diagram the width of it at the standing pillar, and at the doorway 1¾ inches, tapering inside front and back to 1½ inches at each end.

Having this pattern made, we will lay out for the width of the body, which is 53 inches over all; measure 26½ inches, being half the width from base line A, on lines H and B, and mark the two points. Now you can lay the roof rail pattern at these two points, and mark off the sweep for the outside of body, which is the line G. You will take your dividers, place one point on perpendicular line C, being the face of bottom side at the foot of standing pillar, the other point on line B: with this space you can put one point on line G, where it intersects with line B, and mark it off on lines B and H; draw line D from these points, being the face of the bottom side.

Fig. 3 represents the back, half paneled and half framed, and also the sweep required for the curve pattern. You will swell the top 4 inches, the width of the body which is 53 inches, the same as laid out in side elevation, at the standing pillar. This sweep makes a desirable swell, and gives a beautiful top when finished, although the present style is more flat. Back light, 18 by 11 inches; size of curve, ¾ inch deep, 1¼ inch wide; top end rails, 2 inches deep; back and front middle rails, 2¾ inches deep.

Having the patterns complete, you will lay them on the draft, and mark off all the shoulders. This is a saving of time in laying out the body, so that when the stuff is dressed, the shoulders are all struck off, and when swept are ready for gauging.

Wheel-Horse and Mallet.

SPOKE SHAVE, EDITOR.

CONSTRUCTION OF WHEELS.

At the earnest solicitation of the proprietor of the Journal, through friend Veatch, I have yielded to his request, and shall, to the best of my ability, contribute to the columns of the Journal my experience as a wheel-maker; and in doing so, I feel my inability to do justice to so important a subject; therefore, I shall solicit the co-operation of my brothers of the hub fraternity to make up my deficiency.

I am well aware, as is every other member of the craft, that the wheel is the most important part of the carriage, having the greater portion of the labor to perform, while, at the same time, so little importance is attached to the scientific skill required in the construction of the same.

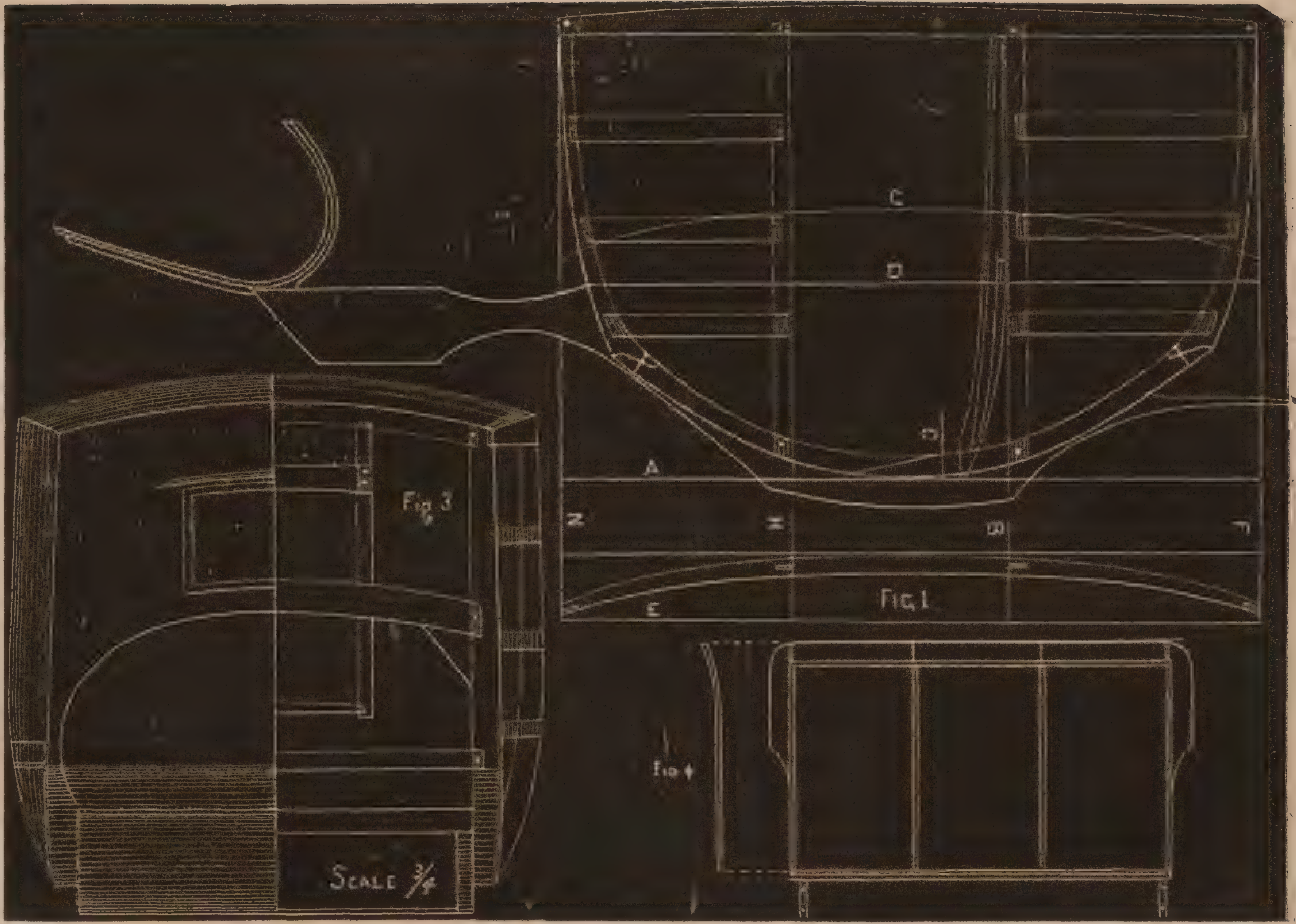
It may be that my opinions of a properly constructed wheel may differ from those whose experience and mechanical skill have advanced them to a point that I have not yet attained; if so, I shall be pleased to hear from them through the same medium, not in the spirit of controversy, but with a view to advance and elevate wheel-making to its proper and legitimate position in the trade.

When we properly consider the relationship of one portion of the carriage to the other, we are more forcibly struck with that of the wheel. I hold that pleasures of the carriage-riding community depend as much upon the wheel being properly constructed, as that of the spring. We find that when the carriage is driven along on a smooth road, that everything appears to be in its proper place, performing its duty in harmony with all other portions of the carriage. How is it when we meet or come in contact with some obstruction? The wheel being the foundation, it is fair to presume that the *concussion* is introduced to the rider or *passenger* through the wheel. Now, we will further presume that the wheel is not properly made, as, *per my opinion*, it has no life or spring, no harmonizing qualities in it; but stubbornly reliant upon its own stubborn *misconceived strength*. What becomes of this concussion? It goes to the *axles*. Here is where the first contest is to be had; the wheel and axle being equal in strength do not consume or *waste* this concussion—it is forced to find a weak point. The shaft coupling is next attacked It is found equal to the emergency; then the spring is called upon to perform its duty with the force of concussion below, and the weight of body and passengers above. It proves to be equal to the demand made upon it. What then becomes of the force of this concussion? Does it not then attack the passenger as the last victim? Most assuredly it does, and we can imagine the sensation as per force of shock—it is anything but a pleasant one.

The whole carriage is condemned, and the spring is declared to be too stiff. It is taken back to the shop, a plate taken out, or a lighter spring put under. That proves to be too weak, and thus it goes. The builder is denounced, the wagon sold, another builder is sought for, with like results. Consequently, the whole fraternity is denounced as incompetent to *cater* to the wants of their patrons.

I think I hear the wheel-maker saying that the whole responsibility is with us. We must admit that while it is conceded that the wheel is the foundation, the most important part of the carriage; while admitting this responsibility, we do so only in proportion to the relationship we hold to other parts of the carriage; and I am proud of that responsibility, doubly proud to know that every day's experience is teaching me that the time is near at hand: yea, the light is dawning upon us already, that employers and patrons are being forced to rate us, *or our branch*, as the most scientific branch of the business. Let us prove ourselves worthy of our high and elevated position.

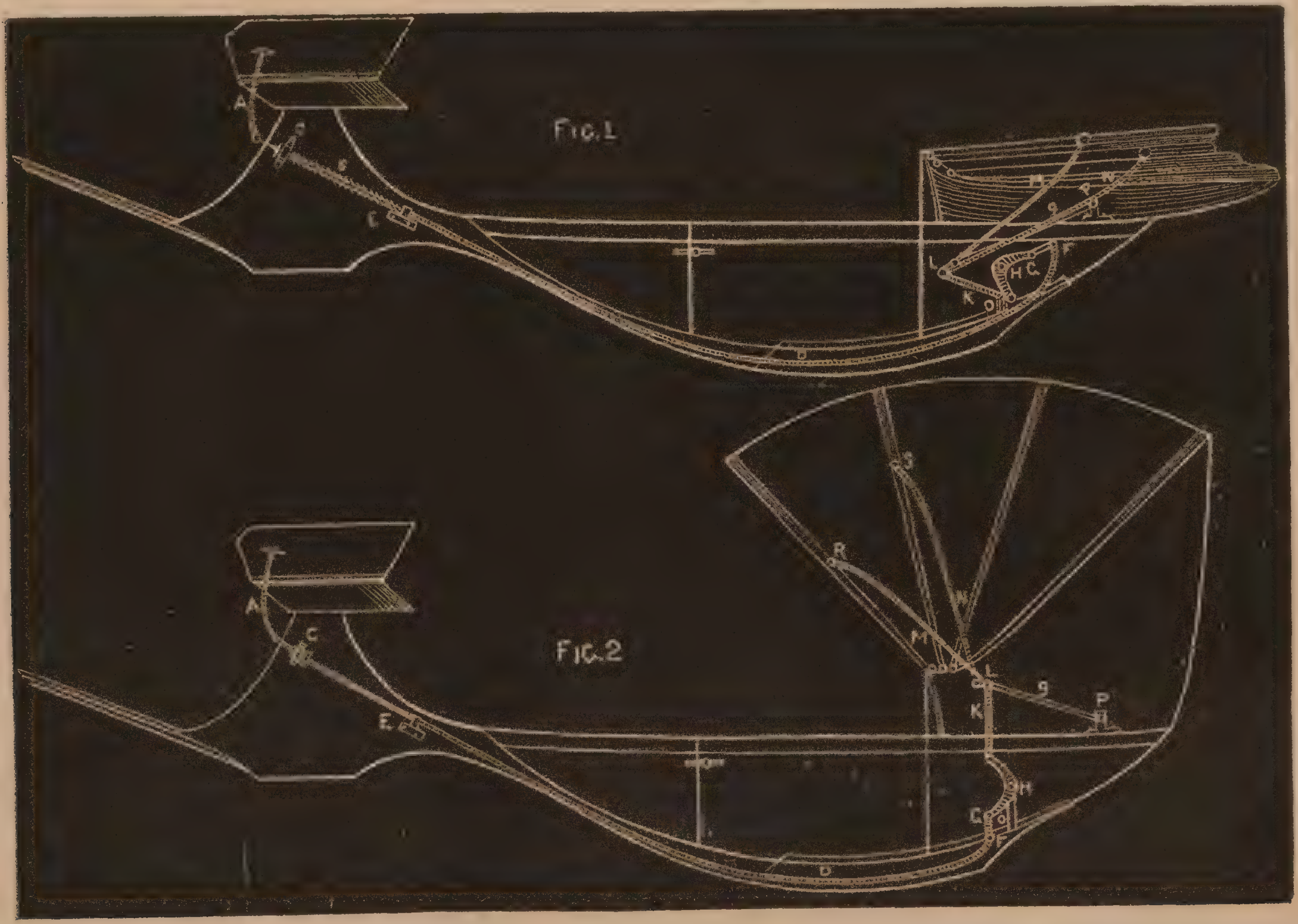
We will return to the carriage as above, and the concussion with the wheel in contact with the same obstruction, with what I conceive to be a wheel properly constructed. I shall not stop here to define how to construct a wheel, as, in my opinion, this concussion runs to the arm of axle. The wheel has life or spring; it yields to the demands of the axle, the wheel being the weaker part, not weaker in durability, but in elasticity. It is in this first contest that this concussion is wasted, the other portions of the carriage receiving nothing more than a quivering sensation; consequently, the passengers receive no apparent shock, as in the case above. With the wheel



Coach Drafting: The Manner of Making Patterns, and Showing the Back View.

Three-quarter inch scale. Explanation on page 42.

THE PRESENT STYLE OF DASH WITH THE END CURVE.

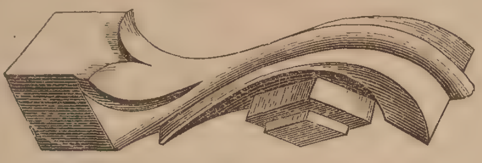


Self-Folding Caleche Top. Explained by V. Ulcan, on page 43.

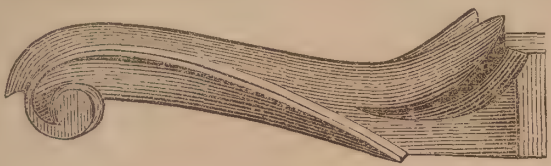
thus made, there is not the fear of breaking the arm of the axle as there is in the case of the stiff or lifeless wheel.

It will be borne in mind that this branch has no fixed rules, as has most other branches of the trade to govern them; consequently, it will require more room for explanation.

Cuts Nos. 1 and 2, which were published in Vol. 2, of this JOURNAL, are here inserted by request. Being still fashionable, they may be of use to those who were not subscribers when they were first given. They are designed for light carriage parts, and make a very neat finish.

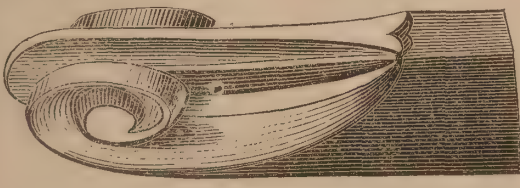


No. 1.



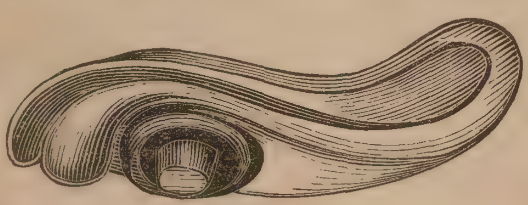
No. 2.

No. 3 is a new style of scroll end for front bar, or bed piece on platform work. When carved as shown, and tastily striped up by the painter, it will not fail to please the eye, and add much to the appearance of the carriage part.



No. 3.

No. 4 represents a late design for the end finish of pump handles for heavy work. . Cast in brass or iron, a great deal of labor is saved in carving. The cut represents a side and top view, or rather a three-quarter view. The surfaces are worked out smoothly, presenting to the painter a chance to display his taste with the striping and cutting up pencil.



No. 4.

For fear of being tedious to the reader, and too lengthy for the editor, I will close for the present.

CAKE PUDDING.—Three tablespoonfuls of melted butter, with a cup of powdered sugar; one pint of sifted flour, two teaspoons of cream of tartar, one of soda, one teacup of sweet milk, one egg. Beat hard, and bake twenty minutes in a small oval or round dish.

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

SELF-FOLDING CALECHE TOPS.

(See front of JOURNAL.)

Many are the devices which have been tried to raise or lower tops on light carriages, and, without disputing the usefulness of some of the contrivances, they require, in almost every instance, the application of the driver to start the joints. In our illustration we have done away with the joints altogether, and have substituted one joint hidden inside of the top and worked by means of a screw and a continuance of levers propelled from the driver's seat. A driver has to take care of the reins, and, except when employing a footman, it certainly causes inconvenience to h[illegible] the coachman step down and adju[illegible] the top. This will be avoided, as we [illegible] endeavor to show.

FIG. 1, TOP OPEN.—The crank *a*, which is finished in the manner of a joint, bent as shown, continues in a screw, *b*, revolving in the socket *c*. This screw draws the long lever, *d*, running inside the rockers, ending at *e* in a cross-piece; through the nut, in the middle of said cross-piece, passes the screw *b*, while the end of the screw turns at *e* in a similar socket as at *c*. The back end of lever *d* has a joint, *f*, connecting a slat at joint *g*. The angular lever, *h*, is bolted to an upright slat, *o*, at the middle of lever *h*, and from hence works all the rest of the levers above slat *o*, which is screwed to the top of the rocker. Next comes slat *k*, driving slat *q*, at joint *p*, at the back and between the two couplings of sham joints *m* and *n* at point *l*.

FIG. 2.—For raising the top, screw long lever *d* up to point *c*, and bringing angular lever *h* in this way full round, you will have the figure as shown, which can be tried by a small model, though the drawing explains it quite sufficient. The distance from revolving points *r* and *s* to the top of bow, is the same in both views, and this is the test of the case in question. The slats and levers are simply riveted together, so as to move easily. Size of the same, ⅜ inch by 1⅛ inches. The long lever should be ½ inch thick, and strong enough to be not liable to bend. The crank has a joint to move it far enough outside the seat-frame when turning.

There is an English patent, on a similar principle, for moving tops on landaus, used by Brewster & Co., of New York, but different in many respects from the foregoing illustration.

We have taken pains to draw this diagram plain, so that it can be clearly understood, and trust it will be found of practical benefit to persons building this style of work.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

The Principles of Coloring in Painting.

Continued from page 24.

Lamp and gas light throw out yellowish-colored rays, causing a great many light colors to appear of a different tone than when viewed by sunlight. Certain shades of green and blue are not easily distinguished by lamp light. A blue fabric will appear to be green, or of a greenish cast, caused by the yellow rays falling upon it. Green being formed by the mixture of blue and yellow, whatever contributes yellow to blue, as in the case cited, or by mixture of pigments, the hue will be green.

When colored rays fall on a colored surface, which is lighted by diffused daylight, the colored surface is changed; the effect being similar to that produced by adding to it a pigment of the same color as the colored light. When red rays fall upon a black stuff, they make it appear of a purple black; white stuff, they make it appear red; yellow stuff, they make it appear orange; light blue stuff, they make it appear violet.

COMPLIMENTARY COLORS.

"The color required with another color to form white light, is called the complimentary of that color; thus, green is the complimentary of red, and *vice versa;* blue is the complimentary of orange, and *vice versa;* yellow is the complimentary of violet, and *vice versa;* because blue and orange, red and green, and yellow and violet, each make up the full complement of rays necessary to form white light."

The foregoing, it must be borne in mind, result from experiments with a prism of flint glass. When a ray of sunlight is passed through a prism of flint glass, and the image received on a sheet of white paper, numerous rays of different color will be noticed. Red, yellow and blue, called primary colors, are made visible. The red rays will be modified by the pure yellow, which, by mixture, produce orange. The yellow rays, being modified or mixed with the blue rays, become greenish, and increase until we arrive at pure green; this hue becomes bluer until we arrive at pure blue.

Place before the eye a bright red object. After looking at it a few seconds, direct the eye upon a sheet of white paper, a faint green image will be seen. By looking at green, red will be called up. Blue will excite the eye to see orange, and orange blue. This is termed successive contrast. In placing colors near each other, it is of the first importance to the painter to bear in mind the above fixed laws. The coach-painter may derive some useful hints from the foregoing. In ornamenting and striping, bear in mind that colors that are complimentary purify each other.

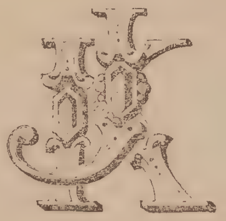
The effect of placing white near a colored body is to heighten that color. Black placed near a color tends to lower the tone of the color. Gray increases the brilliancy and purity of the primary colors, and forms harmonies of contrast with red, orange, yellow and light green.

If green is juxtaposed with black, its complimentary red added to the black makes it appear rusty. Orange, yellow, blue and violet associate much better. Red and blue, or green and blue, placed together, are less pleasing than red and green, or blue and orange, where no other colors intervene to separate them.

Take for example our "starry banner," which is composed of red, white and blue. If, instead of separating the lower edge of the blue field by a white stripe we should use red, the effect would be coarse and offensive to the eye. Why? Because the complimentary of blue is orange, and the complimentary of red is green, which produces a confused effect. Therefore, red and blue not being complimentary, do not purify each other. By the contiguous white stripe, the colors blue and red are separated, and, as we have before shown, that white heightens a color when placed near it, the effect in this instance is to separate and purify the colors in question. And so throughout the flag, the white stripes alternating with the red stripes clear up and increase the brilliancy of the whole.

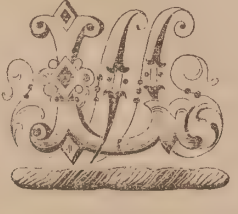
MONOGRAMS.

The monograms J K, L M and N O P are drawn from the square lines, similar to the instructions given in the previous number of the Journal. J K and L M, being ornamental, will require some delicacy of handling. N O P are plain, but locked together so as to form a pleasing variety.



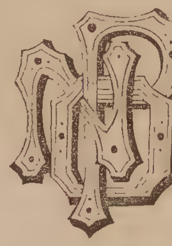
J K.

In the November number we gave a simple pallette for painting the monogram G H. Three colors were selected, viz: vermilion, burnt umber and asphaltum. We will now add flake white, chrome yellow, No. 2, and carmine. By adding white and yellow to burnt umber and vermilion, we obtain a brighter tint of each, and by the addition of a small quantity of carmine to asphaltum we produce a rich warm brown for glazing.



L M.

Having secured a distinct outline of the monograms, take flake white, chrome yellow, No. 2, and vermilion, and mix up a bright straw color and place it to the right on the pallette board. Next take burnt umber and vermilion and mix up a red brown. Take a portion of the straw color, and form two or three tints by adding to it red-brown in different proportions. Place them on the pallette with the lightest to the right, the darker ones ranging towards the left.



N O P.

We now have straw color, two or three deeper tints formed by adding red-brown; vermilion, red-brown, burnt umber, carmine and asphaltum. For convenience in description we will number the tints, 1, 2 and 3.

Coat J K with No. 2, separating the letters where they cross, with tint No. 3, and defining the leafing, &c., with red brown on the shaded side. When dry, high light with straw color and deepen the shades, where needed, with asphaltum tinged with carmine, which forms a rich brown glaze.

L M and N O P we will leave to the taste of the student. A pleasing effect is always produced where the tints employed in ornamenting are mixed of a few colors, but differing in strength.

Thus, from a dark brown you approach the high lights through light brown tints, up to yellow or straw color, and so with other colors. Practice alone will make perfect. By using a few colors at first and mixing them among each other many useful lessons may be learned.

Plymouth, Ohio.

Mr. Editor:—Both numbers of the Journal have been received, and gave universal satisfaction, not only to the subscriber, but to all hands in general. I have two questions to ask P. Alette, which I hope he will answer.

First.—How are the colors proportioned, and on what color of ground work should sea green be painted?

Second.—How are the colors proportioned for London smoke? Yours,

Harry Rough Stuff.

Well, Mr. *Rough Stuff*, having been acquainted with you since my apprenticeship, I will not slight an old friend, nor pass him by unanswered.

Answer to Question 1st.—Mix the ground work for deep sea green, of drop black and chrome green, or chrome yellow, about one part of green or yellow, to three parts black. The color mix of best English Dutch pink, to which is added Prussian blue, in about the same proportion as given for the ground work, viz: one part blue to three of Dutch pink. The tone may be raised by adding lemon chrome if desired.

Answer to Question 2d.—London smoke is mixed of burnt umber, yellow, white, red, and, where in the mixing, either of the brighter colors should be too prominent, black will be found useful to tone them down. Vandyke brown, burnt sienna, and yellow may also be used to make an imitation of London smoke. Let the brown shade predominate, but it must be of a yellowish cast.

Fillmore, N. Y.

Mr. Editor:—How is the proper way to spread color on a body? Wm. F.

Answer.—Buy a set of good flat camel hair blenders, (Mottler's,) and when you have properly dusted your panels, apply the color as thin as it will bear according to its body. Don't mince around over an ordinary sized panel, or even on a large one, but apply the color quickly, spreading it over the panel, and finishing or laying it off while wet. Use as large brushes as possible on the panels. Don't commence on a panel with an inch or two-inch brush when a three-inch could be used as well. We have seen painters make three laps on a small panel, when a quick application of the color, with the proper sized brush, would have laid on a more level coat, and been done in half the time.

Mr. Editor:—Will you inform me how to paint ultramarine blue, what kind of ground work is used, how mixed, &c.?

Yours, &c., R. C. P.

Ultramarine blue is painted on a ground work of blue, mixed as near as possible to the shade of blue you desire.

If you use the ultramarine blue clear, make a dark ground work; if you lighten it up any with white, the ground work must be lighter. Mix the ground work with Prussian or Antwerp blue and white, either lighter or darker according to the shade you wish the color. In painting ultramarine blue, having secured your surface in the usual manner, grind out the ultramarine blue in varnish or boiled oil, and apply with a soft flat bristle brush. The camel hair blender may be used on narrow panels; but, on large surfaces, the bristle brush will be found to work pleasantly, especially where the blue is ground in varnish. Two coats, and a coat of color and varnish, will be sufficient to cover solid.

Shears, Needle & Tack-Hammer.

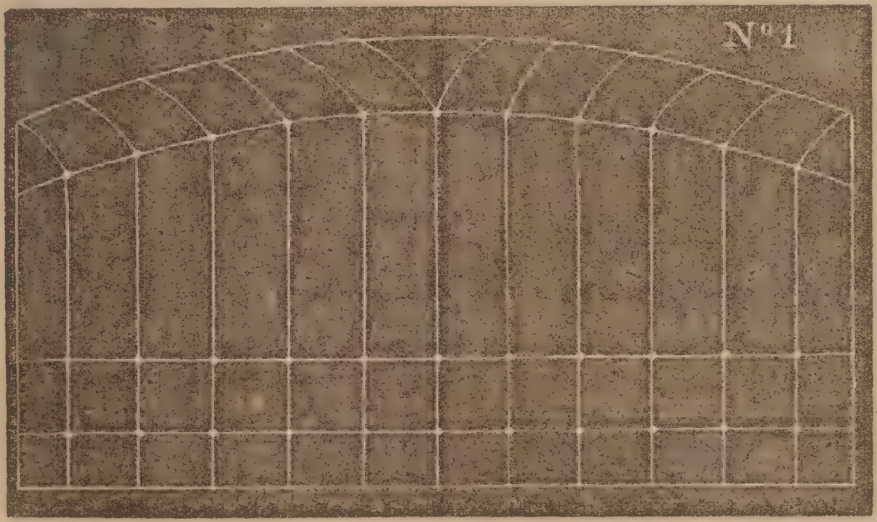
T. ACKS, EDITOR.

SOMETHING NEW IN HEAVY WORK.

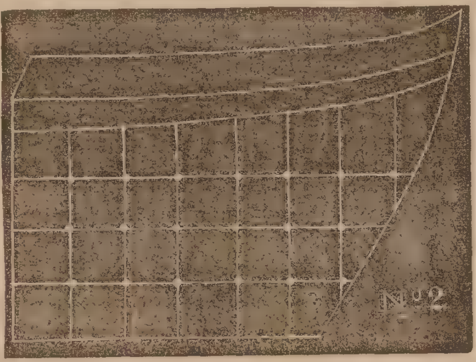
In my last I promised something new for this (No 3) JOURNAL, and in obedience to that promise I would say that this style has just been introduced in New York. It has the advantage of being, in some respects, economical, and at the present rate of prices for trimming goods anything that tends to economy is worthy of attention, while as to the style itself, it is, in my opinion, a very neat one; and from the fact that it meets with favor here, I may recommend it.

FOR A LANDAU OR LANDAULETTE.—The back is made with one full row of squares, two rows of buttons, at the bottom, besides the finishing squares, see the sketch No. 1; then the swell of the back is carried up to within four inches of the upper edge, 1⅛ inches fullness in the swell, then the top of the back is finished with a very large roll, say 5 inches fullness, thus showing the back with only one row of buttons on the upper sweep.

The arm pieces are made in a very peculiar way, and the "modus operandi" is very difficult of explanation. In place of the usual arm piece block, a piece of plank 2¾ wide by half an inch thick is fitted in with the usual sweep to it; now fit four pieces of single fly buckram to form, as it were, a *funnel* the shape of the arm piece desired; then sew seaming lace to the two edges of the funnel, which will show inside of the body; to the lower lace edge sew a piece of cloth in smooth, so that it will cover the bottom of the funnel or cylinder. To the same lace edge blind sew in a piece of cloth, for the purpose of forming a wrinkled roll on this inner face of the funnel, wrinkled one inch fullness to every three inches of length, and as full the other way as desired, for it ought to be full enough to come out flush with the bottom side quarter. Next blind sew the other edge of this roll to the other or top seaming lace, and stuff lightly with hair, thus forming one roll on the inner face, and having the lower face covered with the smooth cloth.

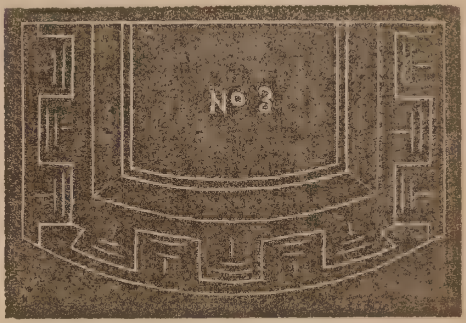


Now blind sew another piece of cloth to the top lace, as in the other case, to form *another* wrinkled roll on top of the funnel or cylinder, but the outer edge of this roll is to be finished by nailing to the outside of the piece of plank first spoken of. All this sewing is of course to be done on the bench, one side of the funnel to be left open for this purpose. Next nail in the bottom side quarter, made up in squares, and then nail the side of the funnel which is fitted against the arm board to the board, and over the quarter, thus finishing the lower part; then nail the fourth or top side to the top edge of arm board; next stuff, from the front, this funnel pretty solid, and finish the top roll, which has been left open thus far, into the outside of the arm board, thus completing the arm piece which shows two wrinkled rolls, divided by two rows of seaming lace, and which, I think, looks first-rate. See sketch No. 2.



ARM PIECE AND QUARTER.

THE DOOR FALL—Is made up on three-ply of buckram pasted together, but one ply is cut off about an inch from the top to allow the fall to hinge. The fall is made about twelve inches deep, the lower edge is a round or a six square corner; presume the broad lace bent and corners sewed, and all ready to put on the buckram, which is cut to the shape intended for the fall, lay the lace on the buckram, and mark where its inside edge comes all round the buckram; then mark 1¼ inches from this mark; next paste a piece of carpet into the buckram to come within half an inch of this mark, which is 1¾ inches from the edge of the lace. Now cover this carpet with a piece of cloth pasting on the buckram; now take a piece of seaming lace long enough to reach around the fall, and sew a piece of cloth to it, for the purpose of forming a wrinkled roll around the three sides of the fall, inside the broad lace and outside the covered carpet, between both, with one inch fullness to each three inches of length; now sew this seaming lace and roll to the buckram at the mark, one and a quarter inches from broad lace; gather the other edge with a running string, and sew down and stuff lightly; finishing in such a manner that the broad lace shall cover this sewed edge; next paste on the broad lace, and cover the wrong side with silk or muslin; when dry, stitch both edges; thus finishing a very beautiful door fall. See sketch No. 3.



DOOR FALL.

THE SWINGING HOLDERS—Are made up on a singly ply of buckram, to which may be pasted a piece of muslin; cut it out 3 inches wide, or the width of the broad lace, and sew a piece of cloth to one side of it, to form a wrinkled roll; one inch fullness to every three of length, except where it is bent; at this point more fullness is required; next sew seaming lace to both edges, stretching in the cushion hooks for this purpose; when done, sew a piece of cloth smoothly to one seaming lace, then turn it over, and blind sew to the other stuff the smooth side with a strip of cotton batting, and the wrinkled side with hair very lightly; sew the frog on eight inches from the top, thus finishing the holder, and saving broad lace; and as the wrinkled rolls can be easily pieced, all scraps should be worked in.

In offering this extended explanation of "how to do it," I do not suppose that it is entirely necessary to the regular city workmen; but I do insist that these explanations are absolutely a necessity to the provincial workmen, as well as to the younger and less experienced members of the craft, and I trust it will be appreciated for its usefulness, as well as its novelty.

I would also say that the arm piece cannot very well be used on any but open quarters, where the workman can finish the upper edge from the outside of the job.

THE PHŒNIX SHAFT STRAPS.

Prepare a piece of board 44 inches long, by nailing two strips of split leather along it, leaving a channel between them; next cut your strips of harness leather, ⅞ wide, as usual, and then split off the face of it in the splitting machine; then take this face, which must be very thin, and lay it on the channel prepared; next stretch tightly a small three edged raiser, or in common, jobs a piece of seaming cord on to it; lay on good paste, and then put the other split of your strap on top; rub down hard with slicker, and when nearly dry, take off and stitch at both sides of the raiser; then cut the strap to scant ⅜ of an inch wide, edge tool and crease, and you have what I consider the very neatest, and most durable strap now made. These straps are only used for trace bearers and whippletrees; use rounded key straps with them.

The Singer Sewing Machine for the Trimming Shop is unquestionably Superior to any other now in use.

To M. A. C., Wellandport, Ontario, Canada:

Dear Sir:—In answer to your inquiry about sewing machines, I am glad to have it brought before the readers of the Journal. You ask my opinion as to which is the best for the trimming room, and I say that I have used several machines; among others, the celebrated Howe's cylinder. Now, this machine (Howe's) is very good for some kinds of work—such as leather or heavy stitching—and will do where a shop can afford to keep another machine for cloth work; in fact, its work on leather cannot be excelled, but it is not fit for cloth. And again, it is so complicated that it is very liable to get out of repair; and when it does get out, or get even any part of it slightly strained, it is very difficult to find what is the matter without the assistance of an expert, and in country shops it may not be easy to procure one of these.

The singer, No. 3, with vibrating foot, costing one hundred and ten (110) dollars, and with a binder, ten (10) dollars extra, is more simple; it is very easy to work; it will stitch cloth or leather equally well; it will use 3-cord heavy thread as well as silk—thus economizing—and, in short it is, in my opinion, superior to any other machine now in use.

How to Keep the Leather from Caving in Between the Bows.—I will certainly publish in No. 4 my idea (practical) of "How to do it."

☞ Owing to unavoidable circumstances our Miscellaneous Departments have been omitted.

Answers to Correspondents.

G. H., Wellington, Ont.—Do not know the make of springs used by Mr. Bonner.

S. S. P., Centre Hill, Pa.—Sent the directions for mixing oak color, by mail.

J. H. T., Petersburg, N. Y.—Communication on marriage received too late for this number. Communications *must* be received by the 15th to insure insertion, and earlier if convenient.

J. L., Collierville, Tenn.—Will be glad to receive an account of "*things*" in your section.

C. J. L., Hamilton, Ont.—Your letter received, with contents. Many thanks for well wishes.

McG & M., Atlanta, Ga.—We think it will be going too far out of our course to open such a department as you speak of.

F. D. K., Albany, N. Y.—Sorry the advertisement of your valuable "*Sleigh Heater*" came too late for insertion in this number; more particulars by mail.

J. P. R, Newburg, Me.—Will attend to your request as soon as we can conveniently do so; have so many different sections to please, we cannot suit all at the same time.

M. D, Attica, N. Y.—You will see by notice in Journal, that the charts will be ready soon.

J. G. B., Miami City, O.—We can furnish you the *six* last numbers of Vol III., but the March number we are out of entirely, except the few numbers we are getting bound.

A. McC., Pontiac, Mich.—The binding of Vols. II. and III., has been delayed owing to the absence of Mr. W., but will be ready in a few days or weeks, and will be forwarded as directed.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—A situation at Carriage Woodwork under instructions. Can give good references. Address Joseph G. Marple, Spring Garden P. O., Lancaster Co., Penna.

Wanted—A good, steady body-maker on buggy and light carriage bodies. To such, a steady job and good wages will be given. Address Jacob Kepple, Greensburg, Pa.

AUTHORIZED AGENTS.

Persons desiring to act as Agents for the Journal, will be required to satisfy us of their responsibility and integrity. Those published as Agents are authorized to receiptfor subscriptions so long as their names are continued on this list.

Charles W. Veatch, General Traveling Agent.
George B. Hamilton, Agent for Felton, Rau & Sibley.
E. N. Dougherty, Camden, N. J.
M. W. Allen, San Francisco, Cal.
Chas. E. Ward, Rahway, N J.
James D. Burke, Brooklyn, N. Y.
James E. Curtis, Schenectady, N. Y.
H. L. White, Boston, Mass.
John Lodewick, Troy, N. Y.
John Kemp, Ravenna, Ohio.
J. . . Hibbs, Washington, D. C.
F. D. Kennedy, Albany, N. Y.
George D. Fry, Cincinnati, Ohio.
H. Hawthorn, Newark, N. J.
A. L Merrill, Concord, N. H.
T. B. Nixon, St. Louis, Mo.
Lem. Cretors, Leavenworth, Kansas.
Bryant & Stulen, Towanda, Pa.
James J. Wright, Lowell, Mass.
Brigham & Warren, Three Rivers, Mich.

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY
SCOTT & DAY, NO. 38 NORTH THIRD STREET.

Philadelphia, November 24, 1868.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.

Axle-clips, Coleman's Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 30 per cent. discount.
Forged, Coleman's Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15½ per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.: No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50.

Axles, Wilmington, C. H. Short, plain taper, ⅞ and 1 in. $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
" Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Axles, Archimedian, short, improved taper, No. 1, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $7.75; 1⅜, $10; 1½, $12.50.

Axles, Archimedian, Half pat., taper No. 3, ⅞ and 1 in.,; $6.00; 1⅛, $7; 1¼, $8.25; 1⅜, $10.50; 1½, $13.
" " Long, improved taper, No. 2, ⅞ and 1 inch, $7.50; 1⅛, $8.50; 1¼, $10.25; 1⅜, $13.50; 1½, $16.50.
" " Half pat., No. 4, ⅞ and 1 inch, $8.00; 1⅛, $9; 1¼, $10.75; 1⅜, $14; 1½, $17

The Archimedian axles are all case hardened; they can be made of Salisbury and Lowmoor iron at an average advance on prices here quoted of $1 to $2.50 per sett. An axle of this brand is also steel converted by the celebrated Bessemer process; it cannot be excelled. Price of short half pat., per sett, ¾ inch, $11; ⅞, $12; 1 inch, $13. Long do., ¾, $13; ⅞, $14; 1 inch, $15.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 35 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1; 1 inch, $1.30.

Buckram, per yard, 17 to 20c.

Carpet, per yard, Brussels, $1.90; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 50c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13½c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.90 to $2.
" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, per doz., japanned and sil., $1.10 to 1.50.

Damask, German cotton, double width, per piece 30 yds., $18 to $21; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 80c. per yard.

Dashes, buggy, per dozen, rough, $20; silver plated, $28. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 34c.; 6-4, 53c.; drilling, 5-4, 46c.; 48 inch, 48c.; 6-4; 58c.; duck, 5-4, 67c.; 50 inch, 70c.; 6-4, 80c.; pat. tan back muslin, 5-4, back 45c.; do., drill, 5-4, 60c.; 48 inch, 65c.; flock drill, 48 inch, $1.00; do., muslin, 85c.; vul. rubber drill, hea., $1.60; light, $1.50; 48-inch,

Felloe plates, wrought, per lb., 16c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.: No. 2½, 33c.; hog, 17c.: best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Patent Improved Knob and Buttonholes, a good improvement. $6 per gross.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.: narrow worsted, 8c.; silk stripe, 10½c.; silk barred, 13½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 17c., do., No. 2, 14c.; railing and collar, 25c. to 28c.; enameled top, No. 1, 27c. to 29c.: do., No. 2, 24c. to 26c.; enameled trimming, 26c. to 28.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $5.00 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

“ spoke ten. machine, each, sm., $15; large, $25.

“ bolt cutting tenoning machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, 0 $3; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 12c.

Name plates, per do., en., Ger. sil. and real sil., $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.: do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, star and flint, per ream, $4.50 to $6.00.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.

“ improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.

“ Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, patent black, $11.75; do., Bright, $13.75; Baltimore patent black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.

“ Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

“ Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $4.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95, 1⅛. $2.10; 1¼, $2.25.

“ ball, ¾ inch, $2.05; ⅞, $2.20; 1 inch, $2.35; 1⅛, $2.50; 1¼, $2.65.

“ close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.

“ close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.

“ ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.

“ neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6

“ Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8.25; 5 bows, $10.50.

“ “ N. Y. pat., per doz. sets, 4bows, $12.

“ Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.

“ plated, short, $1.20; 1 long iron, $1.37.

“ japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ in., 1c. per lb. more.

“ Bright tempered, per lb., 1¼ in., 20c.; 1½ in., 19c.

“ Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top props, silvered, per sett, common, 31c.; extra, 70c. to 90c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.

“ Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.

“ dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.

“ machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.

“ “ Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; ½, $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, $3.

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 55c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per doz., No. B, $3.50; No. C, $3.75.

“ improved, all black, per dozen, $1.75; black, silver top, $2.

“ imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.25 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.

“ ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

“ white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.

“ sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

“ hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in, diameter, $2 to $2. 25 per set.

Poles, hickory, per dozen, rough, $12; finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.

“ sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts, express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in. and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4,50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.

136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body. No. 1, hard drying, $4.50; carriage, No. 1, light color, $4. carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.50; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 45c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 50c.; pure Paris, 50c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Vermillions—English pale, $1.60; deep, $1.50, German gothic pale, $1.50; deep, $1.50; Chinese, $1.60; Trieste, $1.25; Italian, 45c.; American, 35c.; English Venetian, 5c.; red lead, 15c.

Whites—Pure lead, per lb., 14c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c.; English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 10c.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1: Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

IRON AND STEEL.

CORRECTED BY WILLIAM M. WHITAKER,

No. 52 *North Front Street.*

NET CASH.

Tire Iron, Merchant, 3¾ cents per pound; refined, 4½c.; 1x¼. 4¾c. Refined Round and Square Iron, ½ and 9-16, 4¾c.; 7-16 and ⅜. 5c. 5-16, 5½c.; ¼, 5¾c.

Oval and Half-Round Iron, ¾, 5½c.; ⅝, 5¾c.; ½, 6c.

Band Iron, 5½c.

English Refined Slit Rods, 6¼c.

Scroll Iron, ⅞ and 1x3-16, 6c.; ¾ and ⅞x⅛, 6¼c.

Steel Tires, Swedes, 1x3-16, 11½c.; ⅞x3-16, 11¾c.; ¾x⅛, 12c.; ⅝x⅛, 13c.

Spring Steel, 1¼ and larger, 10¼c.

Norway Horse Nail Rods, 8 cents; do., Shapes, 7¾ cents.

American Rolled Horse Shoe Rods, 5½c.

American Hammered Iron, 6½c.

“ “ Axle Trees, 7c.

VOL. IV.

COACH-MAKERS' INTERNATIONAL JOURNAL,

A MONTHLY PUBLICATION,

DEVOTED TO THE INTEREST OF THE TRADE.

With the commencement of the new volume, (October, 1868,) we shall greatly enlarge and beautify the JOURNAL, making it not only the *largest* but handsomest work of the kind published in this country. Our branch departments are under the superintendence of practical men connected with the branch they represent.

Our fashion plates will be carefully selected, with a view to meeting the wants of all sections of the country, and will be *fully* and *clearly* explained.

There being such a demand for copies of the JOURNAL containing the FRENCH RULE complete, and in consequence of our inability to supply them, we have decided to republish it, and will commence with the October number.

OUR PRICE CURRENT OF CARRIAGE MATERIALS will be continued in the same fair and reliable manner.

TERMS—$3 per year, payable in advance.

CLUB RATES.—Three copies, $8; six copies, $15; ten copies, $20.

SINGLE OF specimen numbers, 35 cents each.

Send all money by POSTAL ORDER, *draft or registered letter.*

Postage on the JOURNAL is *three cents* per quarter, prepaid at the office where the subscriber lives.

Canada subscribers will send twelve cents extra to prepay postage.

☞ NOTICE.—In remitting, name at the top of your letter your post-office, county, and STATE. If possible, procure a POST-OFFICE ORDER on Philadelphia. If a post-office order cannot be had, get a *draft* on Philadelphia or New York, payable to our order. If a draft cannot be had, send a *registered* letter. *Do not send money by the express companies unless you pay the charges.*

Any person having sent a club may add other names at any time during the year. The JOURNALS for a club may be sent to different post-offices. When the directions of a JOURNAL is to be changed, say at what post-office it was received, as well as the one it is to be sent to in future.

I. D. WARE, Editor and Publisher,

Office, No. 413 CHESTNUT STREET.

P. O. BOX 2769, PHILADELPHIA, PA.

PERMANENT WOOD FILLING.

A NEW SYSTEM FOR PAINTING CARRIAGES, RAILROAD CARS, &C.,

INVENTED AND PATENTED BY W. PIOTROWSKI, FEB. 17, 1867.

Superior to White Lead or any other Filling now known, being much QUICKER, CHEAPER and BETTER, and in every way worthy the careful attention of Carriage and Railroad Men throughout the country.

VALENTINE & CO.,

No. 32 KILBY STREET,

BOSTON, MASS.,

SOLE MANUFACTURERS AND AGENTS.

This Filling is put up in 1 and 5-gallon Cans, and sold at $6 per gallon, net.

We take the liberty to refer to the following parties, among others, who are using it:

BREWSTER & Co , of Broome street, N. Y.
CORBETT & SCHARCH, West 25th street, N. Y.
W. C. & J. DUNN, Third avenue, N. Y.
JOHN HEIDEN, 54 Marion street, N. Y.
SEBASTIAN & SAAL, 700 Third avenue, N. Y.
PETER WINNE, Albany, N. Y.
LONG & SILSBY, Albany, N. Y.
WM. C. PAYNE, Amenia, N Y.
O. S. & C. FOX, Apalachin, N. Y.
F. S. PEASE, Buffalo, N. Y.
BURGER & KIDNEY, Hudson, N. Y.
J. SPRAGGAN, Hall's Corner, N. Y.
J. T. MERRITT & Co., Kingston, N. Y.
L. F. KLEPHINGER, Lehighton, N. Y.
L. J. BAZZONI, Newburgh, N. Y.
MOORE & ROSS, Oswego, N. Y.
MULLIN & SAGUE, Poughkeepsie, N. Y.
J. H. MARSHALL, Poughkeepsie, N. Y.
JOHN PACKWOOD, Skaneateles, N. Y.
SHAIBLE & BUTLER, Schenectady, N. Y.
E CHAMBERLIN & SON, Troy, N. Y.
H. C. NEWELL & SON, Utica, N. Y.
C W. ACKER, Watertown, N Y.
CHAS. S. CAFFREY, Camden, N J.
K. GRUSZCRYNSKI, Newtown, N. J.
WM. JEWELL, Rahway, N. J.
WORKMAN, MOORE & Co., Alleghany City, Pa.
GEO. SCHROEDER & Co., Mechanicsburg, Pa.
ROBT. SHOEMAKER & Co., Philadelphia, Pa.
J. S. SHAFFER, Pittsburg, Pa
STONER & MARLATT, Pittsburg, Pa.
JOHN CURTIS, Cincinnati, Ohio.
I. & B. BRUCE, Cincinnati, Ohio.
J. W. GOSLING, Cincinnati, Ohio.
E. & H. F. BOOTH, Columbus, Ohio.
LOWMAN & WARDEN, Cleveland, Ohio.

A. & W. F. DECAMP, Dayton, Ohio.
JAMES WILDER, Medina, Ohio.
H. H. PEBBLES, Norwalk, Ohio.
W. R. CROZIER, Piqua, Ohio.
JOHN BLADEN, Toledo, Ohio.
E. S. TRIPP, Wellington, Ohio.
T. B. JOBE, Yellow Springs, Ohio.
WM. BOWERS & SON, Baltimore, Md.
MULLMYER & HUNTER, Baltimore, Md.
JOHN GREEN, Wilmington, Del.
NEWTON & Co., Batavia, Ill.
T. H. BROWN, Chicago, Ill
RUSSELL, MEREDITH &Co., Monmouth, Ill.
ALLISON & Co., Peoria, Ill.
G. WOEBER & BRO, Davenport, Iowa.
HOWE, COATS & Co., Mt. Pleasant, Iowa.
DOHERTY & DIGHTON, Crawfordsville, Ind.
COQUILLARD & WALL, South Bend, Ind.
HUGH JOHNSON, Detroit, Mich.
A. J. WORKS, Berlin, Wis.
WECHSELBURG BROS., Milwaukie, Wis.
T. SALORGNE, St. Louis Mo.
A J. SIMPSON, Omaha, Neb.
G. P. KIMBALL & Co., San Francisco, Cal.
J. W. BUCKINGHAM, Montreal.
H. M. BINES, Biddeford, Me.
J. LORD, Biddeford, Me.
T. & E. W. ADAMS, Exeter, N H.
G. W. MERRITT, Fitzwilliam, N. H.
J. & F. FRENCH, Keene, N. H.
WM. GASKIN, Nashua, N. H.
L. FIFE, Pembroke, N. H.
F. H. NEWMAN, Wilton, N. H.
SMITH & PETERSON, Burlington, Vt.
J. C. THOMAS, Burlington, Vt.
S. PACKHAUS, Gaysville, Vt.

JAMES HALL & SON, Boston, Mass.
W. P. SARGENT & Co., Boston, Mass.
SARGENT & HAM, Boston, Mass.
ROBT. SLADE & SON, Boston, Mass.
CHAUNCEY THOMAS, Boston, Mass.
JOHN P. WHITTIER, Boston, Mass.
M. G. CLEMENT Amesbury, Mass.
F. D. PARRY, Amesbury, Mass.
GEO. ADAMS. West Amesbury, Mass.
J. B. CILLEY, West Amesbury, Mass
G G. LARKIN, West Amesbury, Mass.
THOMAS D. NELSON, West Amesbury, Mass.
A. F. SMALL, West Amesbury, Mass.
A. M. WATERHOUSE, West Amesbury, Mass.
T. J. CONNELL, South Amesbury, Mass.
WM. FINN, South Amesbury, Mass
GEO. W YORK, South Amesbury, Mass.
G. A. FLAGG, Dedham, Mass.
JOHN H. ROBINSON, Fall River, Mass.
BROWNELL & ASHLEY, New Bedford, Mass.
HENDERSON BROS. & Co., Cambridge, Mass.
F. IVERS & Co., Cambridge, Mass.
L. P. RAMSEY, Orange, Mass.
GILMAN ANDREWS, Salem, Mass.
JOHN OCKINGTON, South Deerfield, Mass.
C. H. GERRISH, Taunton, Mass.
GARFIELD & Co., Watertown, Mass.
D. O. BACON, Westboro', Mass.
OSGOOD BRADLEY, Worcester, Mass.
HORACE FRENCH, Providence, R. I.
E. J. ALLEN, Providence, R. I.
DURHAM, BOOTH & WORSTER, New Haven, Conn.
B. H. MERRIMAN & Co., New Haven, Conn.
B. MANVILLE, New Haven, Conn.
L. MANSUY & SON, Hartford, Conn.

Samples of work can be seen at any of the above places and at our office, where we shall also be glad to show our numerous testimonials from parties who are constant consumers of the above Filling.

VALENTINE & CO.,

VARNISH-MAKERS, BOSTON.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

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ORDER AND DISORDER.

"Let everything be done decently and in order," is a command of Holy Writ; but we fear a great many persons have either never heard the command, or, having heard it, have cast it aside as worthless. The words used as our heading, have an extensive application; but whenever applied, they present to the mind two different states or modes of conduct directly opposed to each other. Order reigns where wise and good men conduct the affairs of a nation or state, while disorder is the offspring of the jealousies and ambition of demagogues. Contentment, profitable employment, and a steady advancement in the arts and sciences, and of morality and religion, are the fruits of peace and quiet. Disorder, on the contrary, is the parent of discontent, indolence, extravagance, and everything having a tendency to destroy the frame work of society, unlock the passions of bad men, and eat out the substance of the people. What is true with reference to a state or nation, is equally true among individuals and families.

The tidy housewife generally has a smiling and agreeable husband; and, on the other hand, a man who is careful of his personal appearance, and makes it his study to provide little conveniences and comforts about his home, may rest assured he will find a loving and attentive wife.

To a careful observer whose calling throws him in contact with men of business in different sections of the country, he observes that the thrifty merchants, manufacturers and farmers are those who do business systematically.

When we pass by a farm, and see a comfortable residence, a good barn, well-trimmed orchards, and clean fence corners, we at once decide that the owner is an honest, industrious and trustworthy farmer. When we enter a manufacturing establishment, and find a neat office, well-swept stairways and work rooms, good light and ventilation, and a studied method in every department, an evidence is before us that the proprietor will take a pride in producing first-class work.

The merchant who is deficient in taste, and careless of the interior and exterior appearance of his place of business, thoughtless in selecting suitable clerks and assistants, and slovenly in the display of his goods, may not be surprised to find buyers pass his door, and drop in at his neighbor's store to make their purchases.

But as we have to deal principally with carriage-makers, let us look in upon some of the establishments not a thousand miles away. We are sorry to record that a large proportion of them are careless about the interior appearance. How unsightly it must appear to a gentleman and lady to pass through a shop where old scrap iron, old wheels, bundles of iron, and the like, present themselves on the first floor. Shavings, saw-dust and chips, strewn over the stairway, announce the approach to the wood shop. Plank, panel stuff, hubs, spokes, wheels, tressels, wheel jacks, and every conceivable thing about a wood shop seem to be placed in just the position best suited to be stumbled over, and present the proper angles to catch hold of a lady's skirts, and cause her great annoyance. But they stumble along and reach the trimming room, treading on scraps of leather, clippings of rough linings, tufts of hair and moss, or maybe tow, which is well calculated to give a chaotic appearance. The trimming room is generally the smallest, and easily kept clean; but in the picture before us, (and it is no fancy sketch,) we notice a very dirty floor.

The sweepings of several days are gathered in a mass near the stove, or in one corner. Moss, hair, old cushions, old curtains, scraps of leather, &c., lie in *splendid* disorder under the benches. On the few ready-to-tumble-down shelves overhead, leather, cloth and remnants lie as best they can, having been pitched from below by the trimmer, who, having wearied asking the boss to put up a good cupboard to keep his stock from dust and smoke, now falls in with the ways of the shop, and helps to write disorder in his department. The paint room comes next. An artist dwelleth within. If not, who marked out that portrait on the door with dark lead, and touched it up with yellow ochre? The door-knob is glad to see you, for it clings to your hand. Within is a dark, dingy, low-ceiling room. The walls and window panes are daubed up with every color used in the shop. Bodies and carriages are mixed up together. In one corner a body is being finished; in the same room a boy is sand-papering off a gearing in putty. Confusion is written throughout the shop; and is it a wonder that customers call, look around, and buy elsewhere? We would advise you then, good friends, to put on the best appearance you possibly can. Let order reign throughout the shop.

Have a place for everything, and everything in its place. Put up racks suitable for the different sized iron; keep all scraps and trash to the rear; allow no shavings to lie strewn about, especially on the stairways; put up shelving and cupboards in the trimming room, so that every article may be laid away nicely; renovate the shop from top to bottom, and be not saving of the whitewash. After cleansing the paint rooms, mark out a place in one corner of the room, and let it be kept as the only place where a brush shall be wiped. And last, but not least, straighten up the office. Tear down that old newspaper from the front window, and in its stead hang up a genteel curtain, with the firm's name and number neatly painted on it. If, after a disorderly shop has been thus renovated, the proprietor does not feel better pleased with all his surroundings, and draw a better class of customers, and get better prices, then we would say slovenliness is preferable to activity and cleanliness.

* * *

☞ See advertisement of "Linden Iron and Steel Manufacturing Co."

A WORD TO APPRENTICES.

How great are the advantages of the present day for a mechanical education compared with the time when our forefathers lived, yet how few comparatively avail themselves of the opportunities surrounding them. Take, for instance, the apprenticed Coach-makers, and how few of them ever carry their business farther than the shop door. When leaving their work their minds are taken up with the momentary enjoyments of the hour; they spend their evenings at the theatre or drinking saloon, and in many instances even worse sinks of iniquity, that soon drag them down to an untimely grave. If, perchance, we find one fond of reading, how often is it the case that he spends his golden moments straining his eyes over the light literature of the day, destroying every spark of taste for substantial reading that may perchance have been lingering within.

With the increased advantages for improvement come additional allurements to trifling and foolish pastime.

Go to any of our library rooms and you find works suited to the elevation of the seeker of knowledge in any branch of mechanism. See the many useful periodicals of the day, imparting knowledge invaluable to the young and future mechanics of the nation. Although the advantages for improvement are so great, we fear sometimes the tendency of mechanical ingenuity is to go backwards. The chances for an apprentice who embraces every opportunity to improve himself in his particular avocation are, we think, very great. Look at it at the present time. Where you find a man well skilled in his business, he can command almost any price, while those who tell us "there is no need of their knowing more than they do, for the boss has the work done his own way." "The boss don't pay him enough wages, for he knows more *now* than the boss will let him do." This class generally are obliged to work for low wages, and as soon as their services can be dispensed with, they are set adrift to look for another job.

The apprenticeship is the best time to study and improve yourself. If you fritter away your time until you reach manhood, the attractions from study are much greater, and when the cares of a family are pressing you, but little inclination is felt to improve. Depend upon it, your employer will not be slow in finding out your ability to do, and in proportion to your usefulness will you receive compensation. Save up your little earnings, and expend it in something that you can store in your head, and it will return to you sixty or an hundred fold.

Where is the apprentice that could not, by a little economy or self-denial, save sufficient to procure a copy of the "*Scientific American*," "*American Artisan*," or other periodicals devoted to the dissemination of mechanical ingenuity.

Take, for instance, our own publication, devoted to the interest of coach-makers, and who will say there cannot be much instruction gained by a careful study of the productions of our very able branch editors and correspondents. Are you a body-maker, or learning that branch, follow Mr. D. Board, *practically*, through his explanations of the system of drafting. Are you a smith, a wheeler, a trimmer, or a painter, then carefully note the points laid down in the department you are interested in, and if you are in earnest, you cannot fail to be greatly benefitted.

Remember no difficulty can be overcome by simply wishing "I knew how to do it." Up and at it with a determination to conquer, and it is yours.

If this article should meet the eye of any one who has heretofore neglected to improve himself, commence at once with the new year. Cast off your slothful associates, curtail all useless expenditures, procure a share in some good library, and subscribe for those periodicals that will afford you the greatest assistance. Set your mark *high*, and strive to reach it. But remember you must put your mind on what you undertake, and then *study*.

BUSINESS DIRECTORY.

With the next number of the JOURNAL, we shall open a department for dealers in carriage goods, and shall endeavor to secure the name of every person furnishing materials used in the manufacture of carriages.

This is something that has long been needed, and will doubtless be a great convenience to our patrons, and a source of profit to the dealer.

As the publishing of this extra department will be attended with considerable expense, we purpose making a charge of fifty (50) cents for each name and address to meet this extra outlay. The name to be continued in every number to close of present volume, eight (8) months, making a cost of only six (6) cents per month.

We have placed the amount at this small figure, to induce *all* to send in their names at once, making our list large and complete.

Each name will be in SMALL CAPS, and classified under appropriate headings; all will therefore be particular in writing the name in a plain hand, and designate the kind of goods they are prepared to furnish.

If any desire their name under more than one heading, they will so instruct us, and send an additional fifty cents for each class of goods in which they desire to be represented.

The benefits to be derived by those whose names are here inserted, are obvious to every one. Our circulation is rapidly increasing, and the reputation the JOURNAL has gained, wherever it has been circulated, assures us that it will continue to increase until every town and section of our country shall have been reached.

Send in your name and address, that you may commence with the formation of the list, remembering *always* to enclose the fifty (50) cents.

THE OLD CUSHION.

Probably no one who has read Fred. Pumice's article, "Stray Steps of a Tramping Jour," which closed with the October number of the JOURNAL, but felt sorry his tramping was ended, although of no practical benefit to the reader so far as instructing him in the science of coach-making, (our main object in procuring matter for the JOURNAL,) yet there are but few among us who do not occasionally like something humorous, even should it prove in a measure ridiculous. Mr. Pumice has proved himself a ready writer, and doubtless is a man overflowing with wit and humor. Having again secured the services of his pen in writing up the history of an "Old Cushion," (commenced in the December number,) we feel assured in guaranteeing to our readers a rich treat. It will be continued through the present volume, and will carry the reader through the rebellion, the ups and downs of high and low life, North and South, giving a full history of the circumstances attending the loss of "each button."

Mr. Pumice is a journeyman coach-maker, and comparatively a new writer, but we predict he will soon be brought from his obscure position, and figure conspicuously among the renowned writers of the age

We shall be much mistaken if the "Old Cushion" will not be considered far superior to anything ever yet produced by him.

EDITORIAL RESPONSIBILITY.

Little do the masses of the people think of the power of the press of the country in moulding the sentiment and views of those that govern the nations of the earth. We receive our morning paper, and look over the news, and then turn to see the opinion of the editor on the questions of the day, and if his *political* views be in accord with ours, in nine cases out of ten we receive his version or opinion as our own. Is it because the smartest and most capable men are placed in such positions? Nay; it is because they have the means of making known their views, and are obliged from the nature of their position to *think* and write what they think; while in too many cases the reader has allowed the writer to do his *thinking* for him until he dare hardly express an opinion before he has seen or heard the opinion of others.

We do not presume to think we can change this state of things, but under the circumstances surrounding the editorial position, what a responsibility rests upon him, who daily, weekly or monthly does the thinking for a publication, though comparatively little and unknown. We are often astonished at the implicit confidence manifested in letters we are frequently receiving, regarding our opinion of certain inventions or proposed improvements in carriages; in fact, many inquiries come to us about matters entirely beyond the sphere of a Coach-Maker. Doubtless we have the means of posting ourselves better than some others; in fact, occupying the postion we do, it is our business to keep posted on everything of interest to our patrons. Considering the confidence placed in our opinion with what care should we watch and weigh well every opinion given *editorially*.

The inducements sometimes are great to *favorably* notice a worthless article, or at least to keep quiet, or give it a milk and water notice. We claim to be only man, subject to mistakes, and liable to imposition, and often is it the case that the editor has been thoughtlessly induced from the best of motives to favorably notice an article that was worthless and thereby replenished the pocket of the owner of the article at the expense of the readers.

Again many of our best writers are very loose in their habits and morals, and use their position to encourage and foster a depraved appetite, while others, greedy of gain, stand ready to recommend anything that "pays," even should it be contrary to their "honest convictions." We do not say that we have never made a mistake in the expression of an opinion concerning the utility of an article presented for our inspection; in fact, one case is ever fresh on our memory, and will be a lesson to us for time to come. It is our business to report on recent inventions, when brought to our notice, as soon as we can fully satisfy ourselves of their general utility. We feel, to some extent, the responsibility of the position we occupy, and shall always speak our "honest convictions," whether it "pays" or not.

TO CORRESPONDENTS.

We are again under the necessity of reminding our friends who write to us on business in which they alone are interested, to enclose a postage stamp. Some do so, and we take special pains to attend to them first, and from the heavy expense to us for postage, and, in most instances, for letters that are for the sole benefit of the person to whom we send them, we fear we shall be obliged to say that we will not give them the desired information unless they pay the charges. We often receive inquiries that take hours for us to ascertain, and then return an answer at our own expense. Three cents is small, it is true, but when a person receives such a mail from the office every day as we do, and are obliged to answer most of them, the postage is no small item.

Again, persons send to us to purchase certain articles, without sending the money, and request them sent by mail. This we have done, and, in some instances, have received no return whatever, and are out of pocket for the article and postage also. It is impossible for us to distinguish between the honest and dishonest by correspondence alone, and hereafter those who expect us to give attention to their orders *must* send the money, unless the article can be sent by express, C. O. D., and they are willing to pay for collecting. It would be much better if all would send the money with the order as our Price Current will be sufficient guide as to the amount required.

We are willing and ready to serve our subscribers in any capacity, so far as our limited time will allow. We feel gratified at the marked expressions of confidence from all sections of the country, and shall ever endeavor to merit them; but our pockets are not deep enough to pay so dear for their continuance as we are now doing. Sending us $2 or $3 for the JOURNAL we hardly think ought to entitle the person to draw on us every few weeks for postage, the profits are not large enough, so please don't forget; for we do not wish to talk *plain*, and say we *will not* answer them.

BALTIMORE, Dec. 6, 1868.

MR. EDITOR:—Sir, I have frequently noticed in the JOURNAL accounts of subscribers asking why they did not receive the numbers regular, and your reply that they must have been miscarried. I am very sorry to say that I have lately been one of the unfortunates, not having received the November number. Is there no way to remedy this evil? I take the JOURNAL because I obtain valuable instruction from it. I preserve it for future information, not to throw it away as soon as I have read it; therefore, one missing is a great loss to me. Now, Mr. Editor, in my judgment you should make some provision for this missing number. I dare say if our subscription fee had been miscarried you would have held us responsible. I would have sent on and purchased the missing number, but I do not like the idea of paying for an article the second time. There are those, Mr. Editor, who have hard scraping to get the means to subscribe for your JOURNAL. I think, sir, after a calm and careful consideration of the above, you cannot fail to make some remedy for our loss. Written with the sympathy of my fellow-workman.

(Signed) JUSTICE.

If "Justice" would pay more attention to our remarks, from time to time, in regard to missing numbers, he would have no cause of complaint regarding ourselves, for we repeatedly stated in Vol. III., (and "Justice" is an old sub.,) that we would endeavor (as far as possible) to make good any losses that might occur either through our carelessness or the dishonesty of P. O. Clerks. If "Justice" will turn to page 267, Vol. III., and read carefully "Keep in Good Humor," I think he will be satisfied *our* object is to deal justly.

This wholesale complaint of missing numbers has become a source of great annoyance to us aside from the great expense of sending duplicate copies, and we would hail with joy any arrangement whereby a valuable and desirable publication like the JOURNAL could safely pass through our different Post-offices without sticking to the fingers of the employees, and in some cases the Postmasters themselves.

☞ Send us one dollar, and you will receive our *new* Office Chart by return mail.

OUR NEW CHART.

We think we can safely say we now have the handsomest OFFICE CHART ever offered to the public. It is 24x30 inches, printed on lithograph plate paper of good quality, containing twenty-eight (28) cuts of light and heavy work of the latest styles, with oval centre for manufacturer's card. Though an exceedingly difficult job to execute properly, we consider we have been very fortunate, for a better worked job we never saw, each cut having been brought out clear and distinct. Every Coach-Maker should have one in his office.

If any who have heretofore notified us to send to them fail to receive them, they will please send us word immediately, for with the many orders received the past month, and the charts not being ready when the orders came, we may have possibly overlooked some of them; if so, bear with us, and inform us of the fact. We have a good supply now on hand, and will fill all orders that come immediately. Price $1; sent on a roller, post-paid.

NEW ADVERTISEMENTS.

It is a source of gratification to us, aside from pecuniary benefit, to be able to lay before our readers the names of reliable and substantial furnishing houses, and we would direct the attention of our readers to the following that have been received during the past few months.

C. SCHRACK & Co., 152 and 154 N. 4th street-Philadelphia, one of the oldest Paint and Varnish houses in the United States. Schrack's Varnish is probably better known throughout the country than any other make, and for durability probably has no superior.

S. E. IVES, 220 Market street, Newark, N. J., manufactures Axles of a superior quality. Try them.

SPRING PERCH CO., John street, Bridgeport, Conn., have a world-wide reputation for an excellent article of springs and axles.

TOMLINSON SPRING AND AXLE CO., Bridgeport, Conn., have lately established a branch at Newark, N. J., and associated with them Mr. B. F. Harrison, well known as a manufacturer of first-class axles, and are prepared to execute promptly all orders for fine coach springs and axles.

NEAVE, WARD & Co., 37 and 39 Main street, Cincinnati, keep a large assortment of carriage trimmings, and will be found ready to furnish anything in their line at close prices.

WILSON & HAYDEN, 22 and 24 Main street, Cincinnati, are also large dealers in carriage goods, and deserve a good share of public patronage.

WEST CHESTER SPOKE WORKS, West Chester, Pa., are manufacturing a superior spoke, turned ready to drive. Their machinery is probably as good, if not better, than any in the United States. They are also prepared to furnish felloes of the best quality at rates that will bear a favorable comparison with other manufacturers. Send them an order, and we will guarantee perfect satisfaction.

Christian Kunzig, 507 Vincent street, Philadelphia, is prepared to make to order scroll castings, hearse railings, concealed hinges, or anything used by carriage builders not usually found in furnishing stores. All kinds of plating done as ordered. Give him a call.

Probasco, Rea & Sharp, Sixth and Chestnut streets, Philadelphia, will attend to your orders for engraving on wood, and will be found good workmen, and reasonable in their charges.

Valentine & Co., 32 Kilby street, Boston, Mass., agents for Piotrowski's Permanent Wood Filling, are men of enterprize, and are offering to the public an article of great importance to the trade. From the long list of reliable manufacturers given as references, and the testimony of Brewster & Co., and Corbet & Scharch, of New York City, who have been using it for two years, we should think every coach-maker would be induced to give it a trial at least.

Linden Iron and Steel Manufacturing Co., whose office and works are at Walpole, Mass., are doing a heavy business in Springs, Axles, Bolts, Stump Joints, &c. Though not personally acquainted with either of the officers, we feel satisfied from their manner of doing business, that they mean to make it to the interest of all manufacturers of good work to give them a trial. See their *large* advertisement, and send them an order.

John Walther, Wilmington, Del., has commenced the manufacture of Carriage and Buggy Bodies for the trade; also, Wood Work for Sleighs. From the inquiries for work of this kind, we should judge all that is necessary would be to call the attention of manufacturers to his advertisement.

F. D. Kennedy, 36 Liberty street, Albany, N. Y., has invented a heater for sleighs, for which he has obtained a patent. It comes to us highly recommended, and if it performs what is claimed for it, sleigh riding will be made more agreeable, and the inventor will doubtless receive ample reward for his ingenuity. Success to you, friend Kennedy.

OUR STEEL ENGRAVING.

We are prepared to furnish all yearly subscribers with our steel plate of "Bonner's Turn-out." Having had the plate engraved at a heavy expense, we desire that every subscriber should have a copy, and will continue to furnish them to any who may subscribe for the *full* volume. For more particulars, see page 19 of the present volume.

☞ Send us one dollar, and you will receive our *new* Office Chart by return mail.

Fashion Plates Explained.

FOUR-SPRING CUT-UNDER BUGGY.

Plate No. 13.—The style and general appearance of this buggy will at once favorably impress our readers. Being hung on four springs, and having so large a cut-under, the advantages in turning are great, which in cities is quite an object.

This kind of wagon is designed for two horses, and if finished in good style with a team to match, will make a splendid "turnout." The belt passing around the body is raised.

Dimensions: Width of seat, 30 inches, or to take 3 feet 7 inch bows. Axles: ⅞ inch steel. Springs: 1¼–36 long, 3 plates. Hubs: Diameter, 3⅞; length, 6½. Front band, 2⅝; back, 3¼. Spokes: 1 inch. Tire: ⅞ by 3-16; depth of rim, 1 inch. Wheels: 3 feet 10 and 4 feet 2. Track: 4 feet 8 inches. Front carriage part should be made all of iron, except the bottom bar.

Trimming: Brown cloth.

Painting: Body, black; belt, Bismarck, striped carmine or gold.

COUPE ROCKAWAY.

Plate No. 14.—This beautiful design for a close quarter coupe rockaway will doubtless find favor with the manufacturer. Being finely proportioned, and in many points original, the general appearance, when completed, is such as to attract the attention of purchasers and find ready sale.

Dimensions: Width of body; 3 feet 8 inches on the seat. The front falling back ¾-inch at the coupe pillar, concaved to produce a narrow front. Hubs: 7½ inches long, 4⅞ inches diameter; front band, 3½ inches; back band, 4⅛ inches. Spokes: 1⅜ inches. Tire: 1⅛ by 5-16th inches. Axles: 1¼ inches. Front springs: 39 inches long, 1½ inches, 5 plates, 10-inch open. Back springs: 39 inches long, 1½ inches, 5 plates, 12-inch open. Track: 5 feet. Wheels: 3 feet 4 inches and 4 feet.

Trimming: brown cloth.

Painting: body panels, light purple, lake; belt, and other parts black; belt mouldings striped with fine line of gold. Carriage-part to be painted black, with three-eighths line of purple, edged with gold or canary color.

HALF-SPRING NO-TOP.

Plate No. 15.—To some persons this kind of wagon is very acceptable, as for ourselves we were never partial to the half-spring with side spars.

This style of body, though different in some respects, is very much used, and to persons who admire a deep side, it presents an agreeable appearance. The panel below the belt is sunk 3-16 of an inch, making a very perceptible offset. Side spars taken from second growth hickory. New Hampshire white ash is frequently used, and by some considered preferable on account of its elasticity.

Dimensions: Width of body, 21 inches on seat for half size. Three-quarter size 26 inches. Full size 30 inches. Axles: ¾ inch steel. Hub: 3¼. Front band: 2¼, back, 2⅝. Spokes: ⅞. Tire: ¾ by ⅛. Rims: ⅞ deep. Wheels: 4 feet and 4 feet 4. Track: 4 feet 8 inches.

KIMBALL BUGGY.

Plate No. 16.—The general demand being for styles of buggies, we think our patrons will not object to our display this month.

In this design we have as neat and tasty a buggy as can be found in the repositories in any of our large cities. It is adapted to any section of the country, and will look well, finished costly or plain. It is easy of construction when made in the usual way, and more so when made as described by D. Board, in "Pencil, Rule and Square" Department.

The belt can be either raised, moulded or striped, for a good job the former preferred.

Dimensions: Width of seat to take 3 feet 6 bows. Axles: ⅞, steel. Back spring: 38 long, 3 plates 1½ inch, 9½ open. Front: 37 long, 3 plates 1½ inch, 9 open. Hubs: 3¾ by 6 inches. Front band: 2½, back, 3¼. Spokes: 15-16. Tire: ⅞ by ⅛. Wheels: 4 feet and 4 feet 2 inches.

Trimming: Cloth.

Painting: Body, dark carmine; seat and belt, brown. Mouldings: gold stripe: fine line of gold around top edge of seat. Carriage: light carmine, striped gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

For the Coach-Makers' International Journal.

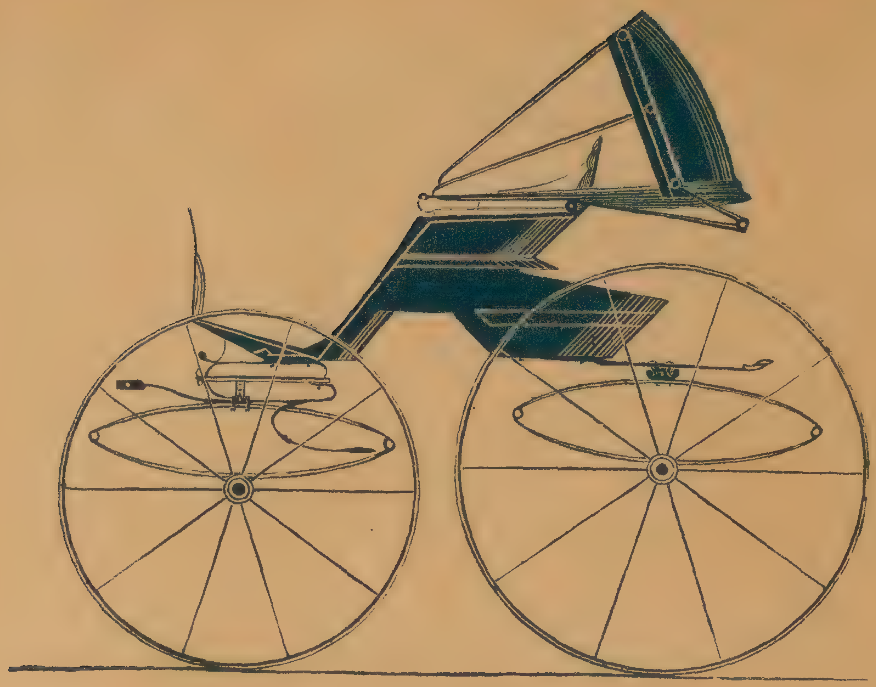
THREADS FROM THE MEMORY OF AN OLD CUSHION.

BY FRED. PUMICE,
Author of "Stray Steps," &c.

CHAPTER II.

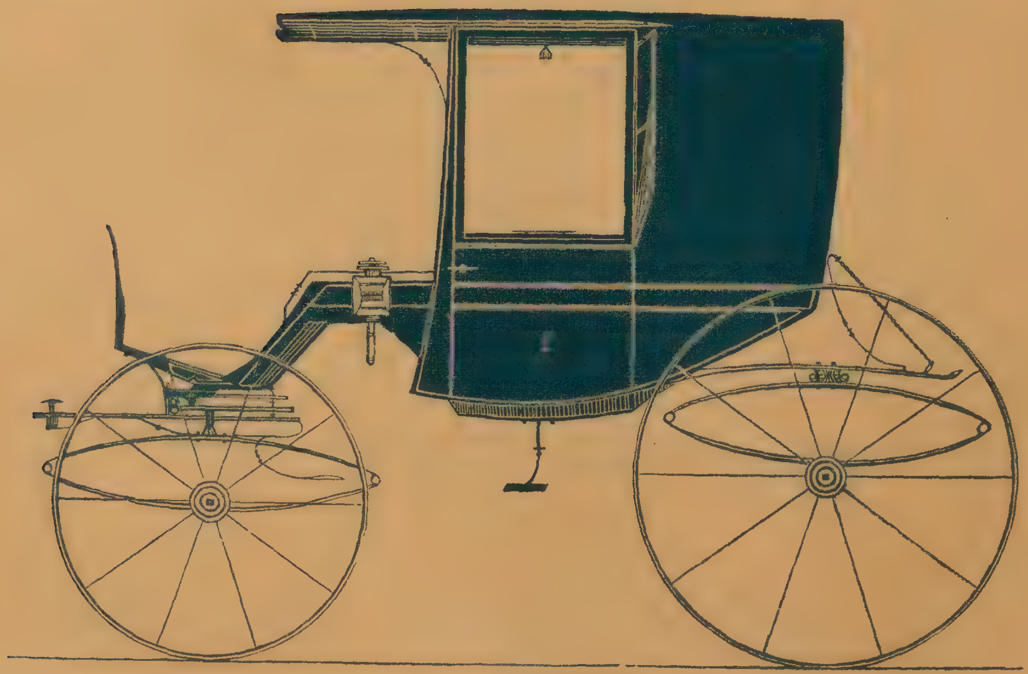
OUR LADY OWNER.

Now, Mr. Fred. Pumice, have you got your ears open, for I am in a hurry to tell you my story. Well; then, listen. For some time after our purchase and debut, into High Road Life, we were used almost exclusively by "our Young Lady." She used to drive out every day, and was very proud of the admiration our "Turn-out" excited among the High Roadites, and, indeed, she was a first-rate whip, and could manage a horse almost as well as any man. And she needed to understand it, too, for I tel



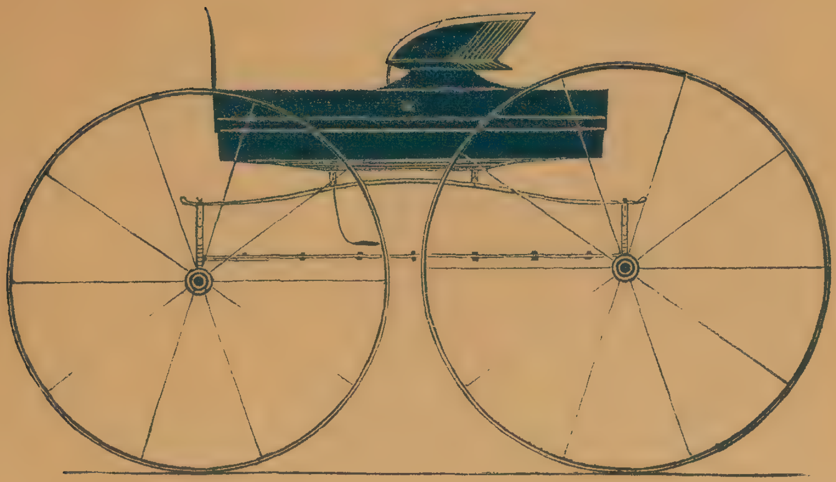
FOUR-SPRING CUT-UNDER BUGGY.

Plate No. 13.—Half-inch Scale—Explanations on page 52.



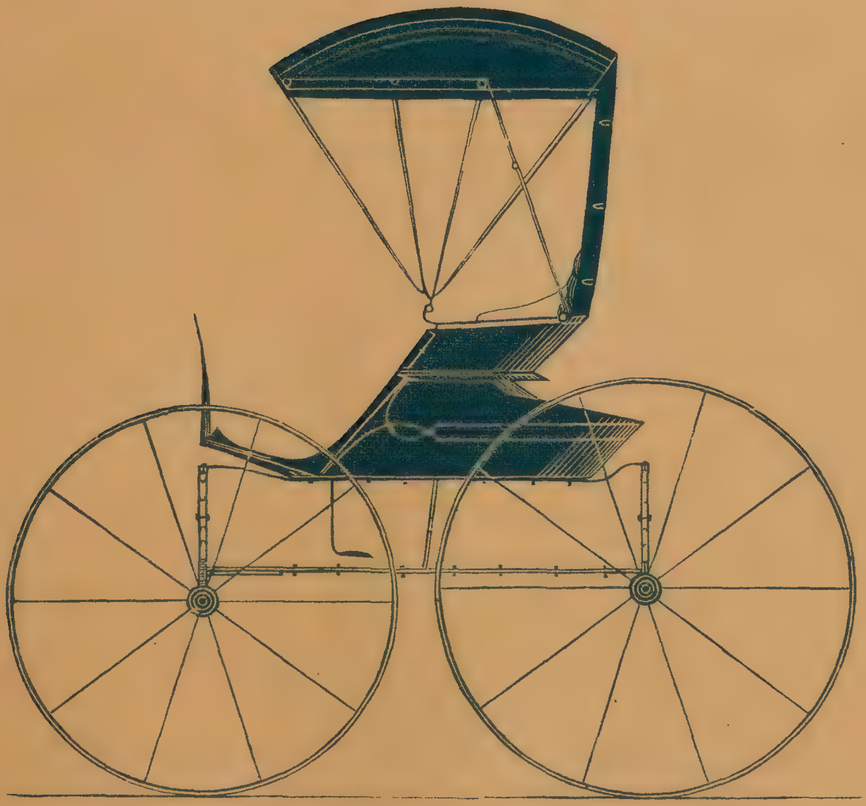
COUPE ROCKAWAY.

Plate No. 14.—Half-inch Scale—Explanations on page 52.



HALF-SPRING NO-TOP.

Plate No. 15.—Half-inch Scale—Explanations on page 52.



KIMBALL BUGGY.

Plate No. 16.—Half-inch Scale—Explanations on page 52.

you she had her hands full with the fine, high-spirited grey we drove.

I used to catch a glimpse of a handsome, dark-looking gentleman "on the road," who always made a point of watching us very closely, and sometimes he would ride on horseback past us, and once, when he lifted his hat so gracefully, I noticed our "Young Lady" was not a bit displeased, and so the next time he passed I am sure he said good evening, and she actually answered him. And thus it went on, until finally she appeared to expect to see him somewhere on "the road," and if she did not see him she looked disappointed, and watched for *him* so closely that she did not watch her grey horse *enough*, and was so negligent, that I was certain he would run away with us some time. And so it proved: for one fine afternoon she did not see her handsome gent "the usual way," and being careless, the grey got scared by a big hog, who was enjoying his siesta in a mud-hole by the side of the road, and who, being suddenly awakened, grunted his displeasure, and bolted from the mud-hold for a hole in the fence—while our grey bolted like a rocket up the road. Our Young Lady held on bravely, but the horse had the bit in his teeth, and not a bit could she check him; while I, being unoccupied, bobbed up and down on the seat, expecting every minute would be my next, and that I would be tumbled out in the dirt, or get run over. I could see her face blanch white with fear as we neared the city, and the number of vehicles increased the danger.

The people scattered right and left; those who drove hugged the side of the road, and not an effort was made to save us as we actually flew on to apparently certain destruction. The grey's temper was now up, and he was wild; but still kept the middle of the road. We were within a half mile of the city, and I thought our "time had come," when suddenly, from a turn in the road, ahead of us, came a horseman, whom I immediately recognized as our handsome gent. He recognized us at the same moment, and I saw him wheel his horse to the same direction as we were rushing. As we neared him I saw his lips were set close, and his eyes were flashing with determination. Our Lady saw him, and dropping the reins, she reached her hands towards him, and cried, "Save me! Oh, save me!"

His horse, as I said, was now going in our direction, and as we closed on him I saw him start his horse into a run, graduating his speed to that of our flying grey, until he brought his horse neck and neck with ours, both striding almost alike. When this was done he reached over and grasped the reins of the grey close back of the bit, with his right hand, while he managed his own fine horse with the left hand, and held on firmly. Gradually, but surely, forcing both horses to slacken their pace until, just as we reached the little bridge at —— street, he had both down to a gentle trot, and we were saved.

The grey was still ugly, but a firm hand held him; and some of those whom we had passed on the road, now coming up, he requested one gent to hold the grey while he dismounted, and he went to assist our young Lady to get out of the buggy, amid the cheers of the crowd which had assembled. But she had fainted, and lay like one dead—in fact, I thought she was; but in a few minutes she revived, and looking up in the face of her handsome, gallant preserver, she said, "Please, drive me home."

That settled the case; no more riding out alone for young Lady. Imagine the thankful expressions of the old gentleman at home; the frightened, happy looks of the old lady, and the bashful, timid, loving glances of the preserved. He was the lion of the city for a week after, and he was our young Lady's watchman ever after. Now, when we rode out, both "cushions" were occupied, and I was as proud as if I had a *new linen slip lining on me*. And why? Because, now I was unquestionably the lady's cushion; my mate, was on the driver's side; there was no mistaking me for the other one, because the seat was flared, and the other would not fit in my place, so there was no cause or fear of jealousy.

Our handsome gentleman was now acknowledged to be the lover of our young Lady. And, my gentle readers, if I could only explain to you my feelings, as I listened to them making love, or could I torment you, my old *Bachelor Blacksmith*, with a recital of the cooings and wooings I was a witness to, your old shrivelled anatomy would swell out like a dried apple soaked in hot water. But I will not attempt it. My feelings I cannot describe them, and a recital of love scenes in a Coach-Makers' Journal might lay the editor open to a suit for damages, by *Ledger Bonner*, for infringement of his universal right to tell all the love stories originating, or that may originate on the continent of America. And none of the readers of this journal would wish to see the two greatest and best publications in this, or any country, *at* loggerheads, or in a law court. So, for fear our *courting* would get to a *court* of law, I will pass it over, and state that at the end of two months we did not ride out so often. And I very seldom saw her or him—certainly, I guessed the reason from the conversation of the stable men. One of them said, when washing our buggy, "So, Tom, we are agoing to have a match of it."

"Aye, begorra, that we are; and a purtier pair I niver clapped Tom Dunigan's two eyes on, nor their purty selves are. Och! murther, ye villyan, ain't she a beauty? Upon my sowl, she is as handsome as an airly primrose on the sunny side of a green ditch, afther a shower. Be me suckins, devil a nayther slip uf a colleen I iver saw since I lift Cork. And thin, the gintleman, bedad he's as tight a lad as yeed meet in a day's walk; and the divil a much he cares for the money aither. The niver a time I hitches up that 'grey' blackguard fur him, but he pitches me a couple if dollars; an he's just as well-mannered as if he'd been raised in ould Ireland, instead iv done there among the naggurs—and, be the same token, they say he owns a power of thim same naggurs, and cotton-fields, an sugar, an the Lord knows what. I heerd Fanny, the lady's maid, say he was worth loads of money."

"Aye, Tom, I heard so myself. Well, he won't lose anything by marrying our young Lady. And I hope he will use her well. They do say that the grey and the buggy is going with them when they leave for his plantation."

"Aye, me boy, he aught to be fond of that horse, fur 'twas by catching him he caught the Lady. And a blessed fine ketch it was."

I knew from this conversation that our young Lady was to be my owner yet. And I was very glad of it; and in a few days we were very carefully dusted, and our buggy washed; the silver polished bright; the grey was harnessed, and in company with several other carriages, we drove to church, the handsome gentleman occupying ours. After that we were not used for a month or so, and I was getting tired of the confinement when, one morning our cover was taken off; we were well cleaned, and again covered up, and a ticket put on, addressed to Ralph Cayton, Esq., Magnolia Landing, Crimson River.

"And hoora fur oranges, Jim-aky Rum an the black fellows who makes it, fur Tom Dunigan and the grey is goin too! Come on, me darlin, the kurnil says he can't do widout us! Come on, ye divil, or we'll be too late—the grate big impayryal won't wait for us. There goes her stame peanny, playing Ould Dan Tucker. Here we are, all aboard. Aisy, ye spalpeen; stop, ye black, murtherin thief, if ye put a mark an that wagon, I'll mark you. Woa, grey! woa boy! Be aisy, now. All right; take care uf his heels, bad manners to ye. Hooroo! *now* we're aff for the counthry where the moss comes from; an aff they'd sthop the scraymin uv that kallyyope, as they call it, I'd be all right. I wondher if it's as far as Cork? The divil a hair Tom cares, ain't the young missus, and the kurnil, her husband, up in the second flure."

Oh, dear! how I was scared by the noise, and puffing and screaming, as we drove along through the waters of the great Mississippi, towards the south; but for my friend, the Irishman, who took such good care of us, I would have popped every button out of me with fright—but he was happy. Our happy young lady and our handsome gentleman was on board. The grey was quiet, and so I thought I would be quiet too. "Ah, there goes the bell for one o'clock, Mr. Fred. Shove me under the bench. Quick, before the *red fellow* sees me. Come down tomorrow again, at *stuffing time*, and I will tell you how I lost my first button. And I will divide my history into nine parts, a part for each button in my top, as every time I lost one I felt so bad that the remembrance sticks bright in my ideas. And by the time I reach the last button, my time, I suppose, will be up, as yours is now. There, shove me under. That will do. Here comes red head."

For the Coach-Makers' International Journal.

A STEP IN CARRIAGE PAINTING.

The most successful man, or as he is sometimes improperly called, the "lucky man," is one who most completely takes advantage of every opportunity, for the great secret of success is the art of seizing every opportunity that offers itself, making one when none is presented, turning even accidents to account, and bending them all to some definite purpose.

Appreciating this truth, I take pleasure in devoting this article, as promised in my last communication, to the new system of painting over a priming called "Permanent Wood Filling," and am happy to thus help bring before the notice of the trade a resource which they may improve, if they only will, and thereby be greatly benefitted. It is an opportunity, and I desire none shall neglect it.

Let no painter reader say, "Poh! some new patent humbug! another innovation!" and then immediately turn over this leaf and search for something which may read after the old manner of things.

It is a comparatively new idea, truly, but it is a rational one—a statement which cannot be made concerning some old ideas—and it bids fair to soon become the idea upon which every carriage-painter will exclusively base his principles. It is a new idea, but in these days every artisan who would turn out first class work must keep up with the progression of the times, and be able to take advantage of every improvement and every advanced idea. If not, he will most assuredly come out the little end of the horn. Still there are many who do not appreciate this fact. They work on the principles of last century, and say: "This was the best way fifty years ago; my father did the best work in all the State, and he always did this way; therefore 'tis the best way now, and I'll continue in it." And thus the poor fellow does go on, limping and dragging along with most questionable success, wholly forgetting that since his father's time the world has grown fifty years older; that since that time, there has grown up a new generation, with new ideas complete, and with entirely new methods of carrying out ideas; a new generation, with new wants, and with consequent new demands, with new diseases and with new remedies, with new appetites and new modes of satisfying them; with new understandings, and with new things to be understood; with new modes of travelling, manufacturing, sending messages—indeed, with new ways of doing anything and everything new to be done; a generation which is a prodigy from tip to toe, and which sets at defiance all comparison.

And still there is too much conservatism left among some classes, and this is one reason why I am so pleased with this signal improvement in carriage-painting—a field rife with wrong ideas, and as an art meriting careful study and practical renovation. With my interest in carriage-making, and in everything which may tend to make it improved and cheaper, I have been led to spend considerable time in giving a most thorough examination into this system in all the manufactories using it, to which business or chance has called me, and the more I have seen, the more I have become convinced of its practical value to the trade.

"Permanent Wood Filling" goes to the foundation of carriage painting, and claims, very reasonably, that there must first be a firm, tough surface upon which to begin. This is not obtained by lead; it cannot be; workmen show by the way they manage, that they do not expect it to be. For just think how they proceed with it. The first coat is highly elastic, and the oil is sucked into the pores of the wood. Where is the lead? That is left upon the surface in the form of a dry, brittle scale, with no firmness, no elasticity, and is therefore easily peeled off. It was used simply as a medium by which to convey the oil upon the wood; and now, having done that work, it is all carefully and laboriously scraped off, leaving the wood merely oiled slightly, and with no firmness of surface whatever. Then two, three, or four additional coats are laid on in the vain endeavor to produce firmness from unstableness.

Now, one coat of "filling" suffices for all these, and does a work they never can do. It fills every pore fully and permanently, and with its thin film forms a tough and elastic surface upon which there can be no fear to build.

The chief points of superiority which the "filling" claims to hold over lead may be briefly enumerated thus:

1. It fills the pores of the wood more completely and more permanently.

2. Being elastic, it will neither crack itself, nor tug and strain upon the coats above it.

3. It is not porous like lead, and thus does not suck and drink away the life and lustre of the varnish above it.

4. One thin coat forms an invincible protection against moisture.

5 It is cheaper in any way; not only in actual cost of material, which would be but a small point, but is a vast saving in time and labor.

And then, when one thinks of the minor advantages, each in itself a great recommendation; when he hears a painter tell of how much more pleasant is its use than venomous lead, and of how it is always ready prepared, and he has only to say to Tom or Pat, "prime those wheels," and the can is opened and the wheels primed without another word; when he remembers all, he cannot but think that an article maintaining all these worthy claims would be in the greatest degree practical and valuable.

And they are all well sustained. 'Tis no longer an experiment, but has now by two years' introduction been most thoroughly proved. 'Tis becoming well established, and is meeting with that favor which it so well deserves.

During the past two weeks, I have probably visited thirty or more carriage manufactories in Boston and New York, and in surely five-sixths of these, among whom, Brewster & Co., and Jas. Hall & Son, may be named as representatives, have I seen wheels and bodies standing here and there, primed with that rich brown color which is so peculiar to this "filling," making the work appear like mahogany or rosewood, and presenting a singular and pleasing contrast to that dirty-white hue which has so long decorated every paint-room.

I have preferred in this way to examine its merits, rather than go to Messrs. Valentine & Co's., its headquarters, and thus having seen it practically demonstrated in these many shops, I can speak from the experience of these many men, and without a doubt or misgiving can give it my unqualified approval I can, with the greatest sincerity, recommend it to every carriage maker, and say, here's a chance; many others are taking advantage of it; don't you let it slip." JUNIUS.

* * *

For the Coach-Makers' International Journal.

PAINTING FLOWERS IN MINIATURE.

BY J. H. T.

Continued from page 39.

SIBYLS.—Sibyls are, according to some, twelve in number; but Martianus will have but two, Pliny and Solineus but three, and Salmafins but the first seven; but Varro allows ten; they are generally represented as young women yet some of them were old, as she which sold the books to Tarquin.

These Sibyls were in high esteem, by some, on account of their prophecies of Christ.

SIBYLLA *Agrippina* is represented in painting, &c., as a woman in years in a rose-colored garment; she is called by divers authors, Aegyptica. Suidas relates, that she prophesied in Egypt in the days of Pharoah. Her prophecy imported that "Hands should be laid on the invisible world; his beauty shall not appear; his mother's womb shall inclose him; and he, who is eternal joy, shall weep."

SIBYLLA *Lybica* was born in Lezbia, and was cotemporary with Euripides. Lactantius allows her the second place among the Sybls, for her admirable predictions, viz. "The time is not far off, when the God of light shall be environed with the radiant beams of the Sun." She is represented in painting as an elderly woman, in purple garments, crowned with a garland of flowers.

SIBYLLA *Delphica* was so called from being born at Delphos; she lived before the siege of Troy, and foretold the manner of that war; and prophesied of Christ as follows: "Know him for thy Lord who is the Son of God. A prophet shall be born of a pure virgin without the seed of man." She is represented in painting, as a young woman, clothed in a black garment, holding in her hand a horn.

SIBYLLA *Phrygia* is represented in painting, as having an old saturnine hard favored face, clad in red garments; many suppose her to be Cassandra. She prophesied very divinely of the day of judgment, as follows. "A trumpet from heaven shall give a very terrible and dreadful sound, all kings shall stand before the judgment seat of God, who will at once judge the just and unjust."

SIBYLLA *Heraphila* is represented in painting, as a young woman very fair, clad in a purple garment, and having her head covered with a veil of lawn, she is also called Erythrea, and as Apollodorus Erythreus writes, was a citizen of Erythrea, in Ionia. She prophesied to the Greeks that they should overcome Troy, and also of Christ, as follows:

"The earth shall sweat as a token of judgment; a King shall come from heaven whose Kingdom shall be everlasting."

SIBYLLA *Europea* is said to have been born in Jerusalem; but the place of her birth is not certainly known. She prophesied thus: "The Almighty shall come accompanied with his legions of angels; he shall walk over the hills and clouds; he shall live poorly and in silence; he shall bear rule." She is represented in painting, as a comely young woman, having a high red-colored face, clad in a garment of cloth of gold, and a fine veil on her head.

SIBYLLA *Persica* lived in the hundred and twentieth Olympiad, and was born in a town called Noe, by the Red-Sea. She prophesied as follows: "O death! though shalt be trodden under feet: the Son of God shall be born into the world, and he shall bring unto men salvation, the invisible world shall be made visible." She is represented in painting, as a young woman in a white veil and golden garment.

SIBYLLA *Samia* was born at Pluten, in the isle of Samos, in the Aegean Sea. She is represented in painting, as a woman of middle age, clothed in willow weeds and holding a palm in her hand. She prophesied six hundred and sixty-five years before Christ, and yet prophesied as if she had lived in his days, as follows: "O ill advised and indifferent people of Judea, who did not turn to the Lord your God, you have not truly known him, but have crowned him with thorns, and have given him gall to drink."

SIBYLLA *Hellespontica* was born in the territories of Troy, in a place called Marmissa, near the town of Gergitha. She is represented in painting, as a young woman of a round, lovely, fresh-colored face, clothed in green garments, holding in her right a pen, and in her left hand a book. Heraclitus Pontilius says, that she was cotemporary with Solon, in the reign of Cyrus about the sixtieth Olympiad. She prophesied as follows: "Be comforted, O ye nations, call upon your God, your iniquities shall be forgiven, and you shall find mercy at the hands of the Lord."

SIBYLLA *Tibertina* was born in Italy, in a town near Rome, on the banks of the River Tibert, from whence she took her name. She is represented in painting, as an old woman, of a hard visage, clothed in a purple garment, and having in her apron the books of the Sibyls. She prophesied as follows: "A branch shall bud from a sweet root, a flower shall spring from thence, and the spirit of the Lord shall rest upon it."

SIBYLLA *Epirotica*, called also Cimmeria, she is said to have been born near the Bosphorus; but others say, in Cimmeria, a town in Campania in Italy. She is represented in painting, as an old woman of a hard-favored face, in a grotto, clothed in a garment of purple and dark color; She is said to have prophesied after the destruction of Troy, as follows: "A virgin shall bring forth a son without the help of a man, and nourish him with the milk of her breasts."

SIBYLLA *Cumana* was born in Cuma, a town in Campania in Italy. She lived in the fifty-fifth Olympiad, in the time of Numa Pompilius and Tarquinius Superbus. She is represented in painting, like a grave matron, covered with a veil, and clothed in robes of blue color, hiding her feet. She prophesied as follows; "After three days he shall triumph over death, return to the light and be the first to give evidence of the resurrection, thereby to strengthen the faithful in the hopes of eternal life."

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☞ See advertisement of "Linden Iron and Steel Manufacturing Co."

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For the Coach-Makers' International Journal.

PETERSBURG, Nov. 21, 1868.

MR. EDITOR:—I see a communication in the November JOURNAL, from our friend G. W. W. H., of Boston, who claims to be unmarried, "never in love;" that's a good joke. I am afraid if the truth was told, he could say,

> "I wooed her as a young man should do,
> But sir, she said, I love not you."

Or, perhaps, he has neglected opportunities, the usual time, and means

> "He that will not when he may,
> When he will, he shall have nay."

It may be that he is not an admirer of the fair sex, and will in the end be like Narcissus was himself,

> "Who, despising many,
> Died ere he could enjoy the love of any."

"Traveling occasionally," that's good; traveling you know is an antidote of love, change of place, absence, out of sight of loved one may cure him, although doubtful. Heinsius merrily inculcates in an epistle to his friend Primierus: first, fast, then tarry; thirdly, change thy place; fourthly, think of a halter; fourthly would be bad for the readers of the JOURNAL. Better set up with the Gal.

> "Fair opportunity can win the coyest, she that is,
> So wisely he takes time, as he'll be sure he will not miss;
> Then he that loves her gamesome vein, and tempers toys with art,
> Brings love that swimming in her eyes to dive into her heart."

Then, after the usual prliminaries, marry the Gal. Don't you think this good advice?

J. H T.

For the Coach-Makers' International Journal.

BOSTON, DEC. 12th, 1868.

To C. E. W., *of Rahway, N. J.*

DEAR FRIEND:—I read with pleasure, and with a good deal of merriment your flaming bulletin in last number, and congratulate you upon being so busy a body, and so successful in coining your labor into cash. You have done well, and I can take in good part your personal appeal that I should follow your noble example.

But bearing the subscription paper is entirely without my sphere of action. I have neither the time nor the talent required, and must therefore unconditionally surrender to you on that point, and decline accepting the glove filled with Grant's cigars, which you have thrown to me. Their loss does not trouble me much, however, for even were I to gain them, they would be but an elephant on my hands, for I shouldn't dare smoke one, for fear it might make me sick, and I shouldn't dare give them away, because a certain young lady, who abominates smoking, might hear of it, and think I disposed of them on her account, and thus an inference might be drawn which would cause me some inconvenience, perhaps even a law-suit—who knows?

I must confess—and I beg your pardon while I mention it—I must confess that I was very much amused after reading your enthusiastic harangue, swelling with bets and wagers, as if you considered yourself far out of reach of every competitor, to find that without your knowing it, a gentleman in far-off California had been for some time quietly gaining headway, until he had now nearly doubled upon you. I would seriously advise you to put your cigars in your pocket, use your $5.50 book for a cushion, and taking your whip from the socket, to urge forward your good steed to his utmost, would you win the heat.

To conclude in soberness, I truly believe you are doing a good work, and greatly advancing the interests of this JOURNAL. I am glad, and thank you personally, and in the name of every fellow-reader, for we should all be pleased to see it placed in the hands of every carriage-maker throughout the country, believing it is able to improve every individual reader, and thus advance the entire trade. And on my part, all is, I shall do as much as I can. If I cannot obtain subscribers, I shall endeavor to do my little towards interesting and instructing those which others have obtained, for subscribers alone are not sufficient—there must be something towards which to subscribe. There must be a boy to blow the organ as well as the man to perform upon it; and although the former has much the inferior station, he is nevertheless indispensable. So, in helping this Magazine, I am willing to join that class which might correspond to the organ boy; for there must be writers as well as readers.

Let us, therefore, go hand in hand, each doing that part which we feel we can do most satisfactorily, and each trying to help and sustain the other in this good work.

Yours very truly, JUNIUS.

For the Coach-Makers' International Journal.

MR. EDITOR:—Having some friends who are coach-makers, I very often have an opportunity of seeing your valuable JOURNAL, and in looking over the last No. (3,) I saw a *spongy* article by a certain "Junius." Now, how would you like to have one from a "Genius?" although said *genius* is *not* a coach-maker. I often visit the several *small* coach factories in this city, to see my friends, and have learnt a little since my first visit, which, if it will not *tire* you nor your readers, I will relate to you. It happened a little over a year ago; I had but one coach-making friend then—more's the pity—who invited me to come and look over the shop. I went, was shown through THE REPOSITORY, where I admired the different styles of *dog carts*, (I learnt that word from a *New York book*,) buggies, rockaways, phætons, &c. After examining, criticizing, and passing enconiums upon them, (as I was bound in politeness to do,) my friend led me some round-about way to the *wheel wright's* shop, and I would here say he made a *wheel right* well; he was very busy—up to the *hub* in work—so busy, in fact, that never a word he *spoke*, and so taciturn was he, that I almost expected him to take some of the *felloes* and pitch into me. We therefore left for the blacksmith shop, in which several brawny men were busy working. I did not like their looks much, knowing they were *forgers*. One man, (whom I took a *step* towards,) was making a *step*, but upon my going up close to look at him, he made the sparks fly so that I was glad to SPRING out of his way. The boss, (my friend,) made a DASH at him and hit him a PLUG under the eye, after which little amusement we left for the body-maker's department. There were but a few men here, although I should have thought there would be more, owing to the numerous DRAFTS in the shop.

I do not wish to RAIL at them, but I must say that the majority of those I SAW in this room were very PLANE men; indeed, they predominate everywhere, and "RULE the roost."

We next struck the paint room, and I must confess I am particularly *green* in a coach-painting shop. The first thing observed by inquisitive me was the way in which the dozen colors on the wall *blended*, (I have since been told they were done with a *blender*.) I suppose P. Alette would have called them *complimentary*. There was one painter there whose prevailing color was RED—red shirt, red head, and red *nose*—although I do not think it was done by paint—(the nose.) Showing him a small brush, I asked him what that was? "That's a tool," says he. "You're a fool," thinks I; "I knew it was a TOOL; any article used by a mechanic is a *tool*." Disobliging mortal!

Next to the trimming shop, which was at the TOP of the building. I managed to FALL at the head of the stairs, and ROLL over into a pile of MOSS and got my HAIR full. SEW picking myself up, and brushing until not a TRACE of my FALL was visible, I took a look around, and bid farewell to the place.

Mr. W., I have tried to tell a *plane, unvarnished* story, (?) and if you think such stories interesting, you may hear again from you well-wisher, GENIUS.

Pencil, Rule & Square.

D. BOARD, EDITOR.

FRENCH OR SQUARE RULE.

PART THIRD.

BY A PRACTICAL CARRIAGE ARCHITECT.

(See front of Journal.)

In this diagram we have used the same engraving as in Vol. III., as the illustration is the same. In laying down the cant, we shall give it in the same system as practiced generally. The centre of body being the lower edge of the draft-board. The cant is the working draft of the body; all lines, except the side elevation, are called the cant, and layed out from half the width of the body. In laying it out we may introduce lines, not known in this rule, but these points it is useless to discuss; by experience, we have found by the introduction of these lines, we can produce a much better swept body. The lines we allude to are the cheat lines S S, also the dotted lines between the roof rail and the cheat lines, which are the arm-rail sweeps. The object in these lines is to reduce the thickness of stuff of the bottom side at the foot of the back and front pillars, which carries an easy sweep up the pillars.

We now proceed and lay down the cant; width of body is 53 inches, E line being the bottom of draft board, or the centre line. You can lay off half the width of body from line E, 26½ inches on lines B and H; with the roof rail pattern placed at these two points draw line G. This gives 3 feet 9 inches on the seat. Take your dividers, and from line C, being the face of the bottom side, and the point put to line B, being the hinge or standing pillar; having that distance, you can prick it on lines H and B, from line G, and draw D the full length of the body, being the face of the bottom side on the cant. P is the pump-handle space, the dotted lines the manner of letting into the bottom side. Measure from line D, 1¾ inches, and draw line J, being the thickness and inside of the rocker. Next you will draw the cheat lines S S, starting the sweep on lines H and B, cheating off it ¾ inch at the front and back end of bottom side, by this line we will draw another line, which is the dotted line, being the sweep of the arm rails, measure 1 inch from the outside sweep, front and back, and draw lines R R.

Now, lay off the concave boot, which is 34 inches wide; measure 17 inches from line E, and on lines W and T draw line X, this being the outside of the boot. Now draw the perpendicular line N; this line gives the point where the boot leaves the front pillar on the cant, and draw the concave line as represented in the diagram. This concave piece on the cant is the neck pattern K. Measure 2 inches *from* line X, and draw line O, which is the thickness of pattern L and the panel. Measure 1¾ from line O, and draw line N, which is the toe board, bracket pattern. You can draw the line inside of boot, leveling for the rocker plate. This plate is 2½ inches by ½ inch, corner turned on the back bar to receive two screws, front ending on the toe-board bracket.

We have now laid out the cant sufficient to ascertain the thickness of stuff required for the different parts of the body. You can take your dividers, and at the points of the draft, where the pieces are to be placed, to get the thickness required. Bottom sides from 4 inch stuff, roof rail 4 inches, back and front pillars 3½ inches, standing pillars 2 inches, rocker underneath the door 1¾ inches, pump-handle 2 inches, neck pattern K, to form the concave, 3¼ inches. L 1¾ inches, F 2 inches, I 1¾ inches. You can mark the thickness on the patterns for convenience in getting out the stuff.

Something New, Useful and Practicable,

Applied to construction of body, on Plate No. 16, in this number of Journal.

The buggy being crowded out of last number to give place for sleigh designs, we were obliged to lay this over losa.

The round-corner buggy has always been a source of trouble to the carriage builder, on account of the difficulty in properly securing the corners, but with the improvements that have been made from year to year, many of the first objections have been overcome, and with the present long stride we think but little difficulty will now be experienced by any third-rate body maker in making a durable round-corner job.

Fig. 1 (see front of JOURNAL) represents the side elevation. Fig. 2, the bottom view, the inside line representing the bottom side, bent in one piece, outside line showing the side and end flair.

Fig. 3 shows the whole outside panel of body in one piece without any joints, O O, the centres, white lines represents the grain of the panel. This panel and bottom side should be steamed and bent on presses made for this purpose, to remain on the press until set. The presses should be made more crooked, to allow for the straightening, when they are taken off. When you gripe to the bottom side, commence at the centre of back at O O points, gripe each way around towards the front.

Fig. 4 represents the end view of side elevation; by this manner of laying out, you can get the width of the seat and all the cross rails to a hair.

Fig. 5 shows the manner of constructing the seat.

Wheel-Horse and Mallet.

SPOKE SHAVE, EDITOR.

In my last I referred to a few of the responsibilities of the wheel, and the importance of the same being properly constructed, so as to work in harmony with other portions of the carriages. That it was also important that the wheel should have life or spring. I shall not, in the present, attempt to explain what I conceive to be requisite to the proper construction of the same, but I shall endeavor to show what I conceive to be of vital importance in connection with the same. I hold it to be next to an impossibility for a wheeler to know of a *certainty* when he has turned out a job possessing the qualifications for service, without he is thoroughly acquainted with his *material*. Experience has taught me that it is just at this point where the fault or defect is to be traced, which turns so many worthless wheels upon the trade or builders, thence to their patrons.

My experience has taught me in the selection of hubs, and it is with the greatest difficulty that there can be one set out of twenty of the same quality and temperament. Some will be found to be hard and flinty, while others are not so hard, but tough; the latter are much to be preferred, for the reason they will hold the spoke, not so liable to check; they more closely correspond with the general run of spokes. The same difficulty is apparent in our selections of spokes. Some will be fine grain and hard, others of open pores, consequently not so hard.

Having drawn the line between the two extreme temperaments or qualities, we will submit it to the judgment of the wheelers, and to all concerned, if in fitting our spokes to the hubs or mortices, if it would be proper to fit the hard spoke and the soft, or the porus to the hard hub the same. Experience teaches, or taught me, that if you do, you find some will go too hard, and some too easy. The hard spoke is liable to mash, thereby rendered worthless, while the porus ones will not go sufficiently tight to compress the porus, so as to render it serviceable. I am aware that I am touching upon a question that many wheelers consider *all bosh*, or useless waste of thought; that it does not pay to pay attention to such fine points; that more money can be made at the business by discarding the same. I must differ with the above class. I contend that if a wheeler properly understands his timbers, and how to work them, that he can work them to a much greater advantage. It takes him no longer to fit them to his mortices than it does when he pays no attention to their different temperaments, but when he comes to drive them he has no fears that some will not settle down to the hub as they should; he will not have the trouble of some going harder than others, which is always damaging to the wheel.

I can see no way by which a wheeler's work will give service and satisfaction, unless he is a competent judge of his timbers. The result is, the builder is charged with using worthless timbers, consequently the reputation of the employer and the employed alike suffer, when neither is to blame. It would be decidedly ungenerous to hold a man responsible for that of which he has no knowledge. It may be said that the wheeler should know his business, which is very true; but we must not be too stringent upon this point, for none of us are supposed to know every thing; if so, there would be no use in Friend Ware taxing himself with the labor of publishing the JOURNAL, and his assistants in the branch departments straining their eyes after a hard day's labor trying to advance and elevate the trade by the diffusion of a more scientific knowledge. I have always made it a rule through life to think and act from a point of positive fact, seeking at all times the advice and instructions from all who have the magnanimity of soul to bestow it upon men, but at the same time, I hold under advisement all such advice and instructions; never take a declaration to be a fact because it has been so declared.

I never let pass any apparent defect in my business without searching out the cause, and I hope that no member of the hub fraternity will consider the above a fact, but to investigate thoroughly what I have referred to in the above. If you do, you will not receive the pith of what I say. It is not my desire to lead in my particular branch. I wish to draw out those whose experience has made them my seniors in the business. My object is to have an interchange of opinion, as to the proper method of constructing a wheel.

I should like *V. Ulcan* to inform me and my brothers of the hub fraternity, as we are much concerned, why it is that, as a general rule, in setting their axles that they give their wheels 5 inch flare, or that much wider on top than they are on the track, and what is the rule governing the setting the *axle*.

FRIEND J. P.—*Davenport, Iowa*:—Your letter of inquiry came to hand December 16, the same having been returned to the office from the fact of being misdirected. It will appear in No. 5.

SPOKE SHAVE.

☞ Send us one dollar, and you will receive our *new* Office Chart by return mail.

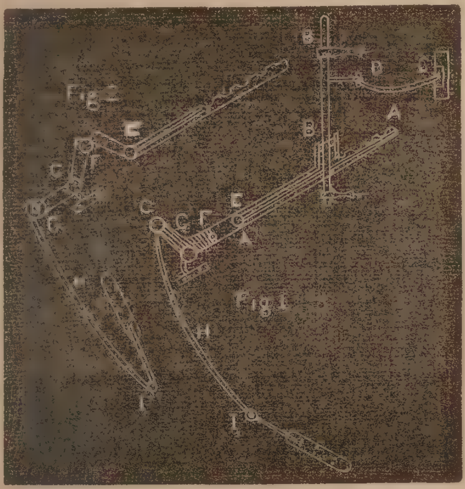
☞ See advertisement of "Linden Iron and Steel Manufacturing Co."

Hammer, Sledge and Anvil.

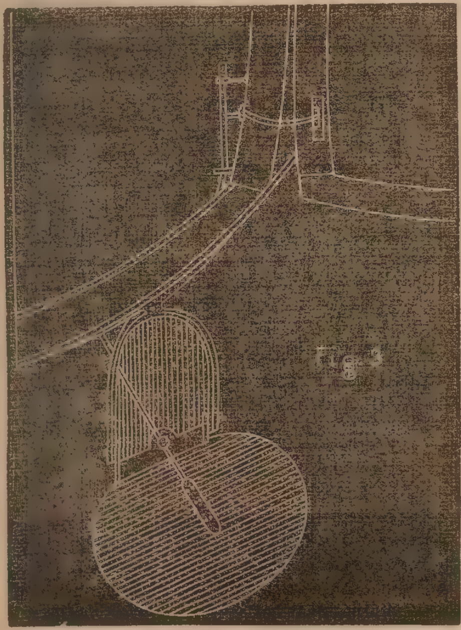
V. ULCAN, EDITOR.

SELF-SHUTTING DOOR-STEP.

The design for double-folding step, given in No. 2 of JOURNAL, having awakened such an interest among our branch of the trade, we have taken some considerable trouble to procure a correct drawing of the present design, which, we think, will be found superior to anything before given to the public. We shall in future numbers treat more on the kind of work suitable for country shops, perch carriages, conveniences of doing work, &c.



The straight gear *a a* is secured to the inside of the rocker, sliding in a corresponding tin case, and by the turning of spindle-gear, *b b* slides forward, as in Fig. 1, opening the door; this throws short lever *d c*, connecting the door pillar with the spindle *b*, in the position, as shown in Fig. 3.



The other end of straight gear, *a a*, connects with joint *e f*, which again moves the lever *g g*, being at its middle joint secured to the inside of rocker. The extreme end of said lever *g g* raises or lowers, as required, the step bar *h* at *g* being broken at *i*, and in this way, revolving in the different sockets, opens the step.

Fig. 2 illustrates the position of the lever *g g* and joint *e f*, when shut, spindle *b b* being shifted to the extreme end of straight gear *a a*, from the left to the right. The end of step-bar *h* is drawn up, and the step closed. The spindle *b b* is to be placed behind the door pillar and covered by the trimming. For the explanation of Fig. 3 apply the diagram Fig. 1, which, as shown, is hidden entirely by the rocker, and although this *modus operandi* has a slight pendular motion in bar *h* at joint *g*, it is a very effective and neat way to work a self-shutting step.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

The Principles of Coloring in Painting.

Continued from page 44.

"There are two systems of painting: one in *chiaros-curo*, and the other in *flat tints*. The first consists in representing, as accurately as possible, upon the flat surface of canvas, wood, stone, metal, walls, &c., an object in relief in such manner that the image makes an impression on the eye of the spectator similar to that produced by the object itself. Therefore, every part of the image which in the model receives direct light, and which reflects it to the eye of a spectator viewing the object from the same point in which the painter himself viewed it, must be painted with white and bright colors. While the other parts of the image, which do not reflect to the spectator as much light as the first, must appear in colors more or less dimmed with black, or what is the same thing, by shade.

"Painting in *flat tints* is a method of imitating colored objects, much simpler by its simplicity of execution than the preceding, which consists in tracing the outline of the different parts of the model, and in coloring them uniformly with their peculiar colors."

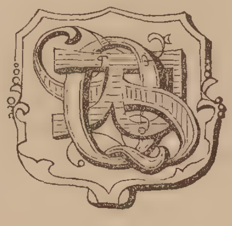
We would advise the student, and press it upon him, to practice with the lead pencil or *crayon* (which is much better) It is immaterial what object you select as a model in the study of lights and shades. Place before you a lamp, an inkstand, books, or any other object. A north light is preferable. Let your position be such as will admit of the light falling over the left shoulder. The first and *most important* matter will be to secure a good outline, being careful as to the proportions of the object. We will take for example a coal oil lamp. The first line to be drawn would be a horizontal representing the bottom of the lamp, at the centre on this line erect a perpendicular, which will give the centre of the lamp perpendicularly. Now take the dividers, (or compasses,) and measure the length of the base, the bowl, the cap and chimney. From the centre line lay off half the width of each part of the lamp. Now trace the outline of the chimney, cap, bowl and base. Having secured a distinct outline, remove with the rubber the lines used to get the proper proportions.

Your outline being drawn, begin by shading the chimney, next the cap, bowl and base. The convex surfaces are easily represented, if it is borne mind that all those parts of the object which reflect the most light, should be lighter in color, and the receding parts of the objects be shaded. Starting from the centre where the highest light will be seen, give the round appearance by gradually deepening the shades towards the outer edges, which must be left lighter to represent the reflected light always seen on circular objects. Having attained some degree of proficiency in drawing such forms, purchase two or three casts in plaster of Paris, which will cost but a trifle. If you prefer figure drawing, select a small bust, a hand, or foot. If you wish to practice scroll work, select accordingly. The lights and shades are more distinctly seen on such models, and to the ornamenter and scroll painter the variety in forms of the leafing is more readily secured. As the use of the crayon and chalk are preferable in drawing to the lead pencil, we herewith give to the new beginner the materials required. Select a tinted paper, so that in putting on the high lights with chalk, the parts so lighted may be distinctly defined. A pair of dividers, a port crayon (crayon holder,) a stick of prepared chalk—some prepared charcoal, and two or three stomps, for blending, and spreading the shades. Outline the drawing with charcoal. Charcoal is used because it is easily rubbed off; when any part of the drawing needs correcting, use a piece of soft rag, or silk, where you wish to rub it off. Having secured a good outline in charcoal, dust off any loose particles that may be on the surface of the paper, and with the crayon, sharpened to a fine point, set in distinctly the outline thus obtained. If you are copying a piece of scroll work, notice carefully those parts of each leaf which reflect the most light, also the gradation of shades.

Rub the crayon on a piece of rough paper, and from this take up on the stomp, (a small quantity) and apply it to the pattern, blending it in. Having properly displayed the variety of forms of the leafing, by the shades and shadows, high light the study with chalk. The student may, after such practice, attempt a design in colored crayons, or in oil. The same principles apply to coloring, that is, the different forms are obtained by the gradation of the tints. In crayon drawing you would use black in different degrees of strength; in coloring use the colors in the same manner. If the part of scroll you are painting should be green, use different tones of green, and so with other colors. The materials given above for crayon drawing can be purchased at most any book store. The stomp is a piece of buckskin, wrapped in the form of cigar, sharpened at each end.

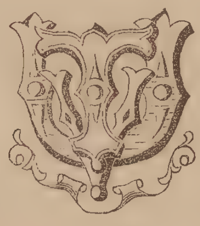
MONOGRAMS.

Q, R, S. T, U, V. The patterns here given will not be found much more difficult of execution than those previously published. T, U, V, to be properly displayed, will only require a distinct outline of each letter, after which size them in, and lay on gold leaf. When the gold is laid, separate the letters where they come in contact, or where any part of one letter laps over that of another, by a wash of asphaltum enriched with carmine. Imagining the light to come from the left, let every part of the pattern on that side be lighted. Put on the shades first; where a leaf is to be brought out, merely give the form of the leaf on the shaded side; where a circle is to be displayed on any part of the letters, sweep around the right hand side, and as much of the bottom as would naturally fall in shadow. Carry out this plan throughout the minutest details.



Q, R, S.

When this is finished, take a clean, fine-pointed sable and *flake white*, or *flake white* tinted with *chrome yellow*, No. 2; or, *flake white* tinted with *light red*, and finish the details in the particular form each part requires.



T, U, V.

To light and shade an ornament, or monogram in this manner, requires practice in pencil drawing. The painter must be prepared to use the sable pencil with as much confidence as the lead pencil, and fully understand the pattern he attempts to paint. When every stroke of the pencil is applied with precision the ornamant or monogram will have a clean, sharp outline in every part.

Q, R, S, will be found more difficult to handle to the new beginner. Q and R should be laid in first. Great care should be taken that the spaces be left sufficiently open, so that each letter may be properly shown. S. The beauty of this letter will depend on the gracefuness of the sweeps. The best pencil for outlining this letter, or in forming curves so small, is a fine line sable, three-eighths or half an inch long. Lay in Q with *gold leaf*, except those parts covered by R and S.

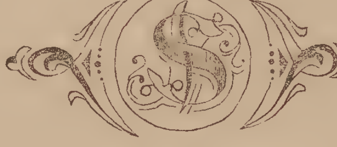
Paint R a rich pink, mixed of *carmine* and *flake white*. Lay the color thin, and light the letter with the same color used heavier.

A dark green will have a good effect in painting S. Outline the letter, and fill in with perpendicular lines as shown. Those parts to be lighted should be touched with lighter green. The form of the outside border or shield should be laid in with gold, and shaded and lighted, as before stated.

The small ornament drawn by the use of the circle, will require delicacy of handling. The letters S, N, within the circle, will furnish good practice in the formation of curved lines. Lay it all in with gold, and light and shade as directed for other ornaments.

It will be noticed that in giving the designs for monograms, they are drawn about the size which will generally be needed for coachwork.

Although none of the combinations may be used, the (initials of names seldom following each other in alphabetical order,) it will be found beneficial to the learner to draw from patterns near the size required for carriage-work.



S, N.

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

The Cheapest and most Practical Method for Keeping the Leather from Sinking in Between the Bows.

I have given this subject a great deal of thought, and I have experimented a great deal in attempting to reach the object aimed at; in a former article I stated the different methods which have been tried to produce the effect desired, but as yet none of them seem to have been perfect. Of late, I have seen a circular which has been widely circulated through the country, showing a view of top with four extra bows, slat-ironed under the top leather, thus giving, as it were, a top within a top; but look at the work of setting the top, and afterwards of dividing and trimming it, to say nothing of the additional weight, when, in fact, our tops are even now what I call *top heavy*, and they should be, (if it is possible,) still more lightened above.

Now, my system tends to this, but I do not pretend to say that it is perfection, (by no means,) but I do say, it is the best way I have yet found, or have seen any one else use. The only difficulty will be in country shops procuring the article used. And even this may be got over through the agency of the publisher of the JOURNAL, if he could be induced to procure it for those parties who may not be able otherwise to get it.

My plan is to set the top as usual in every way, but (where not already adopted,) introduce a light iron stay between *the two back bows* to keep them spread to the full extent; the stay to be just high enough for the leather of roll-up tops to cover; and next, in place of straining web or stretchers of any kind, use *strips of Elastic Rubber*, nearly one-eighth of an inch thick, and four inches wide, two of these on each side of the top, and well stretched on. Now the object of this is very simple. According to the old idea, it was always, (and is,) apparently, the intention to prevent a top from growing longer, by straining webbing on the bows. How ridiculous when you think of it. Why, just imagine, an old top being bigger than when it left the shop! Why, every carriage-maker knows that the tendency is to get shorter. The leather shrinks, the front and back bows cave in in the middle; per consequence, the webbing which was so nice and tight is slacked up, and the stuffing having no support, keeps sinking in as the leather shrinks, more and more, and the falling in of the slacked webb allows the leather to keep continually shrinking.

Next, look at the effect of my reversing this old method. The *elastic webbing* being tightly stretched, will, when the top draws up by the slight bending in of front and back bows, still be as tight as ever under the stuffing, and will always keep the stuffing well up to its place against the leather. The leather may shrink, but it will not force the stuffing in between the bows, as now, under the old way of slack web and tight leather.

Next, the cause why the leather sinks in between the back bows more than elsewhere, is because in roll-up tops the back-stay will always stretch more or less, thus allowing the back bow to go ahead. This is prevented by the stay before spoken of which keeps those bows the full distance apart, while the back joint always will prevent the top from forcing ahead too much. Another point with this stay. The back joint need not be very much strained. You will find no necessity for it, and there will be thus no danger of bending your back bow outward.

TRIMMERS, DON'T USE STICKS.

A great many workmen still cling to the habit of using sticks for the purpose of keeping their tops stretched while trimming them. In plain English, sticks ought to be "played out." Instead of them, get the blacksmith to fit you two pieces of band iron, three-quarters wide and 27 inches long, with a loop, (like a strap loop,) at one end of each piece, and one small hole in each of the other ends, and also a sliding loop with a small thumb-screw attached to it; then slip one piece through the stationary loop and the slip loop, screw the ends to your back and front bow, and you can regulate the size of your top without trouble, by simply sliding the irons to a greater or lesser distance, using the slip-loop with thumb-screw, to *hold it to its place.*

HOOVER'S CARRIAGE BOW-SETTER.

This advertisement was received just as we were going to press with the last form, and we were obliged to insert this notice out of its proper place. Never having seen anything but the cuts and description of it, we cannot speak with any certainty of its practicability; but, so far as our judgment is concerned, with the knowledge we have, we think it just the thing needed in the coach shop, at least it is worthy the attention of all interested, and by corresponding with Messrs. Hoover & Johnson, Green Castle, Penna., doubtless all will be able to satisfy themselves in regard to it.—Ed.

☞ See advertisement of "Linden Iron and Steel Manufacturing Co."

Poetry.

For the Coach-Makers' International Journal.

WILLIE DREW.

BY GERALD.

The day was sultry, hot and dry,
As almanacs are made to say,
When Willie bid brick walls good-bye,
For flowery fields and new morn hay.

A coach-maker was Willie Drew,
Or heavy body-maker rather,
And just as good a workman too,
As ever put a job together.

But business now was very dull,
As all the bosses grumblingly said,
Repositories were crammed full,
And nothing more was being made.

The times were good with other trades,
But Willie did not mind them;
His head was filled with cooling shades,
And he was bound to find them.

And find he did, the grove, the hill,
The vale, the sparkling water,
And what was more attractive still,
A farmer's handsome daughter.

If faults at all had Willie Drew.
And faults are plentier far than pearls,
It was his pride in what he knew
Of human nature and the girls.

From city maids he turned away,
For well he understood
How they were made for show and play,
And not for any real good.

But in this country nymph he sees
A perfect gem of womankind;
All that could a husband please,
In her he thinks to find.

With zeal he courts this bashful maid,
Being daily at her side,
And ere the summer roses fade
He claims her as bis bride.

But ere the honeymoon was over,
Ended were all his joys,
He found she'd been a wife before,
And owned three bouncing boys.

MORAL.

Don't think that hidden truth is seen
In every outward type,
For maids may look green
When they are over ripe.

For the Coach-Makers' International Journal.

THE GRECIAN BEND.

BY GERALD.

There's nothing lovely in the crook,
As far as I can learn;
It always makes the fair one look
Less upright and more stern.

Sally Jane was just that way
Once at an apple frolic;
We thought she'd got—we didn't know what—
But doctor called it colic.

They say the thing is very old,
Some centuries or more;
That in a little different mould
'Twas often worn before.

Let's cry it down, says every one,
And stop this Grecian bending;
But, after all that's said and done,
We see it still ascending.

For the Coach-Makers' International Journal.

THIS REAL OULD ANCIENT GENTLEMAN.

BY DABBS, JR.

In a little *town* just north of here,
Which is known as New York City,
There lives an *ancient* gentleman (?)
Who's the subject of my ditty.

This *agrarian* character
At one time in *coal* did deal;
But now he prints a pamphlet,
The following to reveal:—

That eight hours will never succeed,
A failure it's bound to be;
And that a *strike's* about the same;
The workmen have no energy.

Did you ever see his coal carts?
He shows them up each month, and then
Tries to make people (not *us*, though,)
Believe them to be *Egyptian.*

But I have here no room to tell of
The "id-i-o-sin-cri-cit-ies"
Of this man; for a poet (?) should
Not tell the faults of one he pities.

Friends, my hero's rather *bashful,*
And may-be he would not like
To see this little article;
So *please* keep it from *his* sight.

So our "*waspish*" friend adieu!
Remember, we're a *match* for you;
And as a *match* lights anything,
It *might* explode your *magazine.*

THE LIGHT AT HOME.

The light at home! how bright it beams
When evening shades around us fall;
And from the lattice far it gleams
To love, and rest, and comfort all.
When wearied with the toils of day,
And strife for glory, gold or fame,
How sweet to seek the quiet way,
Where loving lips will lisp our name.

When, through the dark and stormy night
The wayward wanderer homeward hies,
How cheering is the twinkling light,
Which through the forest gloom he spies!
It is the light of home, he feels
That loving hearts will greet him there;
And softly through his bosom steals
The joy and love that banish care.

The light at home! How still and sweet
It peeps from yonder cottage door—
The weary laborer to greet,
When the rough toils of day are o'er!
Sad is the soul that does not know
The blessings that its beams impart;
The cheerful hopes and joys that flow,
And lighten up the heaviest heart.

It is said that an iron mountain exists in the upper part of Usher county, West Virginia, of greater extent and purity than any other known body of iron in the world, not excepting the famous iron mountains of Missouri, and that under this vast body of iron there is a vein of bituminous coal, measuring on the face, where the Buchanan river cuts through, twenty-five feet in thickness.

☞ Hoover's Bow-Setter—See Advertisement.

Youth's Department.

For the Coach-Makers' International Journal.

THE WEATHERCOCK.—N. W. E. S.

BY CHRYSALIS.

"Oh, pshaw! I don't believe the answer in the book is right; for I have worked this half hour and tried it every way, and it won't come out the way it is in the book!" exclaimed Charlie Waters, as he sat pouting over an example on his slate.

"Nothing Worthy Easily Secured," said his father, looking over upon the slate. "I see you have made a mistake, so try again, and you will find the book is right," and Charlie tried again and succeeded, and found great pleasure in conquering. His father called him to his side and said: "My son, you have done well, and I will tell you a story, and give you a motto."

"Oh, pa! tell the story first," interrupted Charlie; and at the word story, Charlie's little cousins, who were visiting him, gathered around his father's knee, who commenced:

"Do you see the weathercock up on yonder steeple?"

"Oh, yes sir!" said they, "and it reads N. W. E. S."

"Well," continued Mr. Waters, "N. W. E. S. means *Nothing Worthy Easily Secured*; now will you all remember this?"

"Yes sir!" and each one said it over to show that he remembered it.

"Now my story is about this motto, and I hope you will learn how a person can, by perseverence and industry, make himself somebody."

"Bennie, take good care of baby, while mamma does her work," said a pleasant mother's voice to a bright little boy.

"Set her out in the sunshine, where everything is so pretty, and I can play near her, mamma."

His mother did as Bennie wanted and then went to her work.

Baby threw her bright chubby little hands up and down and laughed, and tried to talk, but could'nt, and very soon, tired of playing, fell asleep. The little eyelids hid the little stars behind them; but while Bennie was watching, the tiny lips parted and a sweet smile lighted up the whole face. "How pretty," said Bennie, and getting his father's pen and ink and a piece of paper, he drew baby smiling. His mother looked out and saw Bennie writing on a big book on his lap and came softly behind him to see what he was doing. Looking over his shoulder she saw the little cradle and baby's chubby face in it smiling. She startled Bennie by exclaiming:

"I declare, he's made a likeness of Sally." The taste for drawing seemed to spring from this little incident, and for more than a year he drew pictures with red and black ink on all kinds of paper. His parents were very poor and could only encourage him by praising him, and letting him try to do better. One day some Indians came to the village where he lived, and seeing some of his ink drawings, which must have been like their own rude pictures, were so delighted that they told him how to make red and yellow ochre. His mother gave him a piece of indigo, and he was as happy as a king. But what was he do for a brush? He had heard of camel's hair brushes, and not being able to buy them he pulled the hair out of the black cat's tail and afterwards out of her back to supply the want. One day a gentleman from Philadelphia saw his pictures, and was so much pleased with them that he sent Bennie a box of paints and two engravings. Bennie did not take his eyes away from this treasure the whole evening, and the next day he carried them off up stairs into his garret. For two or three days he forgot all about going to school until the master came to see what was the matter, and his mother went up stairs to find him, and he was painting away at a picture of his own, combining the two engravings that had been sent him. His mother burst into tears at the sight, and instead of scolding him, caught him in her arms and kissed him, and never would let him finish the picture. Thus he struggled, working hard, and before he died was one of the greatest painters of modern times—BENJAMIN WEST.

"Thus you see that whatever is worthy is hard to secure, and may you always remember your motto," said Mr. Waters.

May all my little readers never get discouraged, but make N. W. E. S their motto. Next time we will see what S. N. E. W. means.

For the Coach-Makers' International Journal.

THE WEE LITTLE MOUSE.

A FAIRY TALE.—BY CHRYSALIS.

Once upon a time, that was a very long time ago, a dear little girl, name Stella, lived with her grandmother who was very old and feeble.

Stella had a very good kind heart, and loved everything, and could not bear to see even a fly hurt, and she once cried very hard when her grandmother killed a chicken. Now her grandmother had a big black cat named Tabby, who was the terror of all the rats and mice about the house. One day a wee little white mouse ran across the room, and Tabby was going to jump from Stella's lap, where she was dozing, to catch it, but it appeared so pretty to Stella that she held the cat fast, and so the little mouse was free. Stella then put Tabby out of the room and went to the corner where the mouse had run and saw a wee little hole. She then went to the cupboard and took a nice piece of cheese and toasted it at the stove, and laid it down by the mouse's hole. Mousie soon came out and ate the cheese, and looked at Stella so prettily that she was glad she had'nt let Tabby catch it. Every day she fed it, and it soon grew so tame that it would eat out of Stella's hand.

One day Stella's grandmother died, and she was left all alone in the world with no one to care for her. While she was wondering what would become of her, the little mouse ran up to her and jumped up on her lap and said in a wee little voice, "You love me, don't you? and if you do I will take care of you, for you have been very kind to me and took care of me."

Stella was very much surprised to hear a mouse talking, and thought of all the fairy stories her grandmother had told her, and wondered if this was a fairy all the time, acting a mouse, for fairies had done stranger things than to be mice. She answered that she did love this wee little mouse who had been such a nice playfellow for her. Then the mouse said, "listen to my story:"

"A long time ago there was a great prince, who lived in a beautiful palace near a river. Everything was happy until one day a wicked fairy came and wanted the prince to do something very bad. He would not mind her, so she turned him into a mouse and gave his palace to one of her friends. The prince, not wishing to live in a place where he had been so grand, ran away into a big corn field, where the field mice took good care of him, and wished he would stay with them and marry their daughter. But he would not. So away he went over the fields until he came to the river. Here he did not know how to cross; but seeing a hollow log lying in the water, he crept in and laid down to sleep. When he woke up he found the log was floating away down the river, and heard the little mice squeaking over his head. Looking very slyly out of his hole he saw the funniest sight upon the log that ever was. The first thing he saw was old mother mouse sitting on her hind feet and leaning against some moss, and ordering many more mice to get ready the supper.

To take a better look, our mouse had to change his position, and being so large he set the log to rocking, and very nearly upset Mother Mouse, who had to get down on to her fore feet to hold on. Little Mousie who was bringing the soup, upset it all over his mother, who flew into a passion, and asked if it was not better to be drowned in water than in hot soup, for they had all been nearly thrown into the river. Little Mousie asked her pardon and ran away to get some fresh soup.

Prince Mouse was afraid to move for fear he would throw them all into the river, so he had to lie still and watch them. Pretty soon they laid the table right near his peep-hole, and he felt sure he would be found out, and when old Mother Mouse herself came and sat down close by him, he trembled for fear she would see him.

Oh, how nice that toasted cheese smelt to the hungry prince mouse, and while the old mouse was scolding little mousie, he reached up and took the piece off her plate, without being seen. Mother Mouse got done scolding and reached down to eat her cheese and it was gone. Reaching out her paw she caught the mouse on her left by the ear, and commenced beating him, and said:

"I'll teach you to take my cheese, you young rascal. Steal your poor old mother's cheese, you varmint!" all the time pinching the innocent mouse's ear and beating him soundly. The poor mouse could only deny having taken it, which only made Mother Mouse all the worse, for she did not allow her children to contradict her. Prince Mouse made a very comfortable dinner of the things he stole from the table; but just as he was taking the last mouthful from Mother Mouse's plate, she saw his paw and held it, and cried out here is the thief, and made him come out and tell who he was. When he had told his story, old Mother Mouse said: "You can never get your kingdom yourself; your child, a wee little mouse, must get it for you; so you must marry one of my daughters or we will throw you into the river." Prince Mouse had to consent, and he could now see why the field mice wanted him to stay with them. So he married old Mother Mouse's oldest daughter and I am their son, and I have gained the kingdom for my father, and the little girl that will love me is to be my princess, and since you have been good to me and loved me, you and I will live in a great palace together. He then chirped very loud, and a grand carriage drove up to the door, and a noble king got out and threw some water on the wee little mouse, who became a handsome prince, and he and little Stella lived happy their lives.

MORAL: Be kind to everything.

Remedies and Receipts.

HAIR, removed by fevers and other sickness, is made to grow by washing the scalp in a strong decoction of sage leaves once or twice a day.

THE leaves of geraniums are excellent for cuts, where the skin is rubbed off, and other wounds of the kind. One or two leaves must be bruised and applied to the part, and the wound will be cicatrized in a short time.

BEE STING.—The following is a Prussian remedy for a sting of a bee: "Beat an onion on a hard body to extract the juice, to which add a pinch of salt. Apply the mixture to the sting, and the pain and inflammation will cease."

THE oil of pennyroyal will keep mosquitoes out of a room, when scattered about, even in small quantities.

STOP BLEEDING OF A WOUND.—Lay on the orifice, lint; if that is not sufficient, put on flour and lint.

A HOLE in a tin dish may be mended by cleaning around its edge, sprinkling on a little rosin, putting on a lump of solder and heating the other side with a lamp, or otherwise, until the solder melts.

MUFFINS.—Two pounds flour, pint warm milk, two eggs, tablespoonful melted butter, half teacup yeast, teaspoon salt; stir well together; set in warm place two or three hours; then bake in rings on a griddle.

INDIAN MUFFINS.—Pour boiling water into a quart of yellow corn meal; stir well; let it be thick batter; when cooled, add a tablespoon yeast, two eggs well beaten, a tablespoon salt; set in a warm place to rise; then butter the pans; fill them two-thirds full, and bake in a quick oven; or bake as wheat muffins.

TO PICKLE RED CABBAGE.—Slice it into a cullender, and sprinkle each layer with salt; let it drain two days, then put it into a jar, and pour boiling vinegar enough to cover, and put in a few slices of red beet-root. Observe to choose the purple red cabbage. Those who like the flavor of spice will boil it with the vinegar. Cauliflower cut in bunches, and thrown in after being salted, will look of a beautiful red.

LEMON PIE.—Two cups of sugar, two of warm water, two eggs, two lemons, three ounces of butter, one tablespoonful of corn starch; grate the rinds of the lemons, use the juice of both, but the rind of only one, or it will be bitter; beat the sugar and eggs together, then add the juice and rind, then the butter and corn starch, then add the warm water; this is sufficient for two pies.

NAIL IN THE FOOT.—To relieve from the terrible effects of running a nail in the foot of a person or horse, take peach leaves, bruise them, apply to the wound, confine with a bandage, and the cure is as if by magic. Renew the application twice a day, if necessary; but one application usually does the work. This has cured both man and beast in a few hours when they were apparently on the point of having the lock-jaw. This recipe, remembered and practiced, will save many valuable lives.

FLOATING ISLAND.—Take one quart of milk, put it on the fire, with a few pieces of stick cinnamon. Beat the yolks of six eggs very light; add sugar to your taste. When the milk boils, pour it slowly on the egg; then put all back on the fire, stirring constantly until the thickness of cream. Be very careful not to let the custard boil. Pour out to cool; then take the six whites and place on the ice until time to beat for the float. Mash a full cup of raspberries, with powdered sugar, and when the eggs are beaten stiff, then whip them in the fruit, or, if you have none in winter, take jelly.

POTATOES FOR BREAKFAST.—Take the mashed potatoes left from dinner the day before, mix them with a little hot milk and butter, put them by spoonfuls into an iron pan, previously heated, and brown them in a hot oven. They are very light and nice. These iron biscuit pans are wonderfully convenient articles—applicable to so many uses.

HAIR CURLING LIQUID.—Take borax two ounces, gum arabic one drachm, and hot water (not boiling) one quart; stir, and as soon as the ingredients are dissolved, add three tablespoonfuls of strong spirits of camphor. On retiring to rest wet the hair with the above liquid, and roll it in twists of paper, as usual.

Efficacy of Onions.—A writer says: "We are troubled often with severe coughs, the result of colds of long standing, which may turn to consumption or premature death. Hard coughs cause sleepless nights, by constant irritation in the throat, and a strong effort to throw off offensive matter from the lungs. The remedy I propose has been tried by me and recommended by me with good results, which is simply to take into the stomach, before retiring for the night, a piece of raw onion, after chewing. This esculent, in an uncooked state, is very heating, and collects the water from the lungs and throat, causing immediate relief to the patient."

A bee, if undisturbed after stinging, but left entirely to its own instinct, will endeavor to extract the sting by whirling around rapidly, and usually succeeds in getting away uninjured.

Scraps of Humor.

"A Man who'll maliciously set fire to a barn," said Mr. Slow, "and burn up twenty cows, ought to be kicked to death by a jackass, and I'd like to do it."

A country girl, coming from the field, was told by her cousin that she looked as fresh as a daisy kissed with dew. "Well it was'nt any fellow of that name, but Bill Jones, that kissed me; confound his picture! I told him everybody would find it out."

Stage Manager—"John go see if the ladies for the ballet are all dressed, for the audience is getting impatient."

John returns—"Almost ready, sir, got most of their clothes off."

An indignant orator, at a recent meeting, in reply to his opponent, exclaimed:

"I scorn the allegation, and I defy the allegator."

An Irishman with a heavy bundle on his shoulder, riding on the front of one of the Neck cars, was asked why he did not set his bundle on the platform. He replied, "Be jabers the hosses have enough to drag me, I'll carry the bundle."

A Dutchman was summoned in court to identify a stolen hog. On being asked if the hog had any ear-marks replied: "The only earmark dat I saw was his tail cut off."

"Did you know," said a cunning Gentile to a Jew, "that they hang Jews and jackasses together in Portland?" "Indeed," retorted Solomon, "den it ish vell dat you and I ish not dere."

A clergyman being accosted by an old acquaintance by the name of Cobb, who was deeply intoxicated replied:

"I don't know you, sir,"

"My name is Cobb."

"Ah, sir, you have so much corn on you that I did'nt see the cob."

Put two persons in the same bedroom, one of whom has the toothache, and the other in love, and it will be found that the person having the toothache will go to sleep first.

"Pa, is Pennsylvania the father of all the other States?"

"Certainly not, my child; why did you ask that question?"

"Cause I see all the newspapers call it Pa.

When an Irish priest rebuked his parishoner for drunkenness, and told him that, "whenever he entered an alehouse to drink, his guardian angel stood weeping at the door." "And if he had sixpence he'd be in himself," was Pat's reply.

"Sister," said one of the brethren at a love feast, "are you happy?" "Yes, deacon, I feel as though I was in Belzebub's bosom." "Not in Belzebub's bosom." "Well, in some of the patriarch's, I don't care which."

Enraged schoolmaster—"John, did you let off that cracker?"

John—"Yes, sir."

Schoolmaster—"Well, what do you suppose I ought to do to you?"

John—"Why, I think you ought to let me off."

The Other Quadruped.—As a fop was riding a very fine horse in the park, a young and pretty lady was very evidently admiring the animal, when he stopped, and impudently asked: "Are you admiring me, miss?" "No," was the ready reply. "I am admiring the horse not the donkey."

"Do you observe how devotional Deacon Buffam is?" asked a good lady of her husband. "Yes, my dear, the Deacon is very devotional. He always keeps his head bowed in prayer till the contribution-box has passed."

A clergyman happening to get wet, was standing over the fire to dry his clothes, and when his colleague came in he asked him to preach for him, as he was wet. "No, sir, I thank you," was the prompt reply, "preach yourself; you will be dry enough in the pulpit."

Among the gifts to a newly married pair was a broom sent to a lady, accompanied with the following sentiment;

"This trifling gift accept from me,
Its use I would commend;
In sunshine use the brushy part,
In storm the other end."

A physician was called to a man in Philadelphia, and on being asked if he hadn't taken something strange into his stomach, replied that he believed he had—"It must have been that glass of water. Have'nt been so imprudent, doctor, for ten years."

How She Knew.—Two young misses, discussing the qualities of some young gentlemen, were overheard thus:

"Well, I like Charlie, but he is a little girlish; he has'nt got the least bit of a beard."

"I say Charlie has got a beard, but he shaves it off."

"No he has'nt either, any more than I have."

"I say he has, too, and I know it, for it pricked my cheek."

That's how she knew.

Miscellaneous.

☞ Hoover's Bow-Setter—See Advertisement.

A Method has been adopted of uniting iron and steel in the construction of rails, so as to obtain the advantages of steel on the faces, while making the stem mainly of the cheaper metal. It has been found impracticable to weld the two satisfactorily, and this difficulty is now obviated by connecting the two steel faces by a thin steel plate, like the letter H; thus making a complete rail of steel, except that the stem is slight—a sort of skeleton stem—reinforced with a sufficient thickness of iron rolled on each side to give the necessary strength and stiffness.

How to Straighten Hardened Steel.—To straighten steel after it has been hardened, is a great annoyance to the machinist. It is one thing to finish a tool or mechanical appendage requiring hardening, and another to bring it out, hardened as it should be, right. Many a drill, turning tool, tap, &c, is ruined simply for want of knowledge of this art. To be sure, the bulk of the responsibility rests with the temperer or hardener; but what they fail in may in many cases be remedied by a knowledge of simply the fact below: To straighten a piece of steel already hardened and tempered, heat it lightly, not enough to draw the temper, and you may straighten it even on an anvil, if not really dead cold, by a hammer; but it is best to straighten it between the centres of a lathe, if a turned article, or on a block of wood with a mallet, where the article, cold would break like glass. Warm, it will yield readily to such blows as are said to kill the devil easy.

Starting Just Right.—Says Amos Lawrence of himself: "We five boys were in the habit, every forenoon, of making a drink, compounded of rum, raisins, sugar, nutmeg, &c., with biscuit—all palatable to eat and drink. After being in the store four weeks, I found myself admonished by my appetite of the hour of indulgence. Thinking the habit might make trouble if allowed to grow stronger, without further apology to my seniors, I declined partaking with them. My first resolution was to abstain one week, and when the week was out, for a month, and then for a year; finally, I resolved to abstain for the rest of my apprenticeship, which was five years longer. During that period I never drank a spoonful, though I mixed gallons daily for my master and his customers. I decided not to be a slave to tobacco in any form, though I loved the odor of it, and even now have in my drawer a superior Havana cigar, given me not long since, by a friend, but only to smell of it. I have never in my life smoked a cigar; never chewed but one quid, and that before I was fifteen, and never took an ounce of snuff, though the scented rappee of forty years ago had great charms for me. Now, I say, to this simple fact of *starting just right* am I indebted, with God's blessing on my labor, for my present position, as well as that of numerous connections sprung up around me."

Periodicals.

The "Scientific American" is one of our most valuable exchanges. With the January number commences its twentieth volume, and we cheerfully commend it to all in search of practical scientific knowledge.

"Peterson's Ladies' National" and the "Ladies' Friend" are both commencing the new volume. The January number has been received, and give promise to far outstrip their former volumes in interest and usefulness to the ladies.

"The Galaxy" finds its way regularly to our sanctum, and it is received with pleasure not only by us, but by the other half at home.

"Oliver Optic" and the "Little Corporal" are claimed by the "little ones at home," and right well do they appreciate them. No family should be without a copy of each.

The "American Artizan" is still as interesting and instructive as ever. Its publishers, Brown, Coombs & Co., are determined to not be outdone in furnishing the public with a reliable scientific paper.

☞ Hoover's Bow-Setter—See Advertisement.

Answers to Correspondents.

J. A. G., Newville, Pa.—The price of Permanent Wood Filling will be found in Valentine & Co.'s advertisement, also in Price Current. Your other questions will be answered in our next.

J. S., Tipton, Iowa.—Your question will be answered at length in our next number.

H. K. and others, Baltimore, Md.—Whatever arrangement was made with you by our agent, Mr. Veatch, is all right, and will be strictly adhered to. Do all you can for us.

J. L., Troy, N. Y.—Send on the names as fast as you get them, and don't let that B——— monopolize all your spare moments.

G. C. F., Grand Rapids, Mo.—Goods will be sent as soon as ready. It takes some people a good while to do a little.

H. G., New Haven.—Mr. V. is out of town; will hand him your letter on his return.

S. & S., Barnesville, Ga.—Your letter, inclosing money, has not been received. We do not hold ourselves responsible for money lost, unless sent as we direct. If not by postal order or check, then *register*.

H. L. H., Brick Meeting House, Md.—Right glad you accepted our explanation and concluded to try us. The circumstances were certainly very peculiar.

T. F. N., Lima, Ind.—We are prepared to furnish back numbers of present volume. Having our forms electrotyped each month, we shall not be in the same fix as we were with the last volume. Send in your orders, we will fill them.

G. D. D., Leeche's Corners, Pa.—It was our mistake sending you the wrong number. You need not return it, but give it to some friend that you think *ought* to subscribe. We have mailed you another.

J. B. A., Guelph, Ont.—Sent Journals as ordered. Send us all the subscribers you can.

S. & M., Batavia, O.—Your letter was mislaid; we will attend to your requests, and answer by mail.

Z. A. P., Jackson, Miss.—Many thanks for your kind offer. Do what you can for us.

J. S. D., Halifax, N. S.—Will send subscribers hereafter as directed in your last, We can pay only U. S. postage here.

☞ Hoover's Bow-Setter—See Advertisement.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—A situation at Carriage Woodwork under instructions. Can give good references. Address Joseph G. Marple, Spring Garden P. O., Lancaster Co., Penna.

Wanted.—Every dealer in coach-makers materials, of any description, to send us their name and address, enclosing fifty cents, which will insure an insertion to the close of the present volume, (eight months,) in the Business Directory of the Journal.

Wanted—Every Coach-Maker to send for one of our New Office Charts containing twenty-eight cuts of light and heavy carriages. Price one dollar.

Wanted—The special attention of carriage manufacturers to the advertisement of the "Linden Iron and Steel Manufacturing Company."

Wanted—The attention of every manufacturer to the reliability of our Price Current of carriage materials. Compare it every month with your bills, and save yourself ten times the price of the Journal.

Wanted—A Trimmer and Woodworker immediately on sleighs. Address Daniel Dean, Tamaqua, Pa.

Wanted—The address of manufacturers of *three* wheel velocipedes.

Wanted—The manufacturer's address of a *better* Boxing Machine than Silver & Dole's.

AUTHORIZED AGENTS.

Persons desiring to act as Agents for the Journal, will be required to satisfy us of their responsibility and integrity. Those published as Agents are authorized to receiptfor subscriptions so long as their names are continued on this list.

Charles W. Veatch, General Traveling Agent.
George B. Hamilton, Agent for Felton, Rau & Sibley.
E. N. Dougherty, Camden, N. J.
M. W. Allen, San Francisco, Cal.
Chas. E. Ward, Rahway, N J.
James D. Burke, Brooklyn, N. Y.
James E. Curtis, Schenectady, N. Y.
H. L. White, Boston, Mass.
John Lodewick, Troy, N. Y.
John Kemp, Ravenna, Ohio.
J. W. Hibbs, Washington, D. C.
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James J. Wright, Lowell, Mass.
Brigham & Warren, Three Rivers, Mich.
Adam Meisel, Wilmington, Del.
R. H. McDanel, Wilmington, Del.
J. B. Edwards, New Haven, Conn.
Joseph Brown, West Troy, N. Y.

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

Philadelphia, December 24, 1868.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.

Axle-clips, Coleman's Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 35 per cent. discount.
Forged, Coleman's Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50.

Axles, Wilmington, C. H. Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11: 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
" Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Axles, Archimedian, short, improved taper, No. 1, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $7.75; 1⅜, $10; 1½, $12.50.

Axles, Archimedian, Half pat., taper No. 3, ⅞ and 1 in.,; $6.00; 1⅛, $7; 1¼, $8.25; 1⅜, $10.50; 1½, $13.
" " Long, improved taper, No. 2, ⅞ and 1 inch, $7.50; 1⅛, $8.50; 1¼, $10.25; 1⅜, $13.50; 1½, $16.50.
" " Half pat., No. 4, ⅞ and 1 inch, $8.00; 1⅛, $9; 1¼, $10.75; 1⅜, $14; 1½, $17

The Archimedian axles are all case hardened; they can be made of Salisbury and Lowmoor iron at an average advance on prices here quoted of $1 to $2.50 per sett. An axle of this brand is also steel converted by the celebrated Bessemer process; it cannot be excelled. Price of short half pat., per sett, ¾ inch, $11; ⅞, $12; 1 inch, $13. Long do., ¾, $13; ⅞, $14; 1 inch, $15.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 35 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1: 1 inch, $1.30.

Buckram, per yard, 17 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, per doz., japanned and sil., $1.10 to 1.50.

Damask, German cotton, double width, per piece 30 yds., $18; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 80c. per yard.

Dashes, buggy, per dozen, rough, $20; silver plated, $28. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 34c.; 6-4, 53c.; drilling, 5-4, 46c.; 48 inch, 48c.; 6-4; 58c.; duck, 5-4, 67c.; 50 inch, 70c.; 6-4, 80c.; pat. tan back muslin, 5-4, back 45c.; do., drill, 5-4, 60c.; 48 inch, 65c.; flock drill, 48 inch, $1.00; do., muslin, 85c.; vul. rubber drill, hea., $1.60; light, $1.50; 48-inch,

Felloe plates, wrought, per lb., 16c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Patent Improved Knob and Buttonholes, a good improvement, $6 per gross.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.: narrow worsted, 8c.; silk stripe, 10½c.; silk barred, 13½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 16c., do., No. 2, 13c.; railing and collar, 25c. to 28c.; enameled top, No. 1, 26c. to 29c.; do., No. 2, 24c. to 26c.; enameled trimming, 26c. to 28.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $5.00 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting tenoning machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.
Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, 0 $3; No. 3, cuts ½ to 1 inch, $40.
Moss, per lb., 10c. to 12c.
Name plates, per do., en., Ger. sil. and real sil., $4 to $4.50.
Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, star and flint, per ream, $4.50 to $6.00.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, patent black, $11.75; do., Bright, $13.75; Baltimore patent black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
" Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $3.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95, 1⅛. $2.10; 1¼, $2.25.
" ball, ¾ inch, $2.05; ⅞, $2.20; 1 inch, $2.35; 1⅛, $2.50; 1¼, $2.65.
" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.
" ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8; 5 bows, $10.50.
" " N. Y. pat., per doz. sets, 4 bows, $12.
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.
Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ in., 1c. per lb. more.
" Bright tempered, per lb., 1¼ in., 20c.; 1½ in., 19c.
" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.
Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.
Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.
Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.
Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.
Top props, silvered, per sett, common, 31c.; extra, 70c. to 90c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.
Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.
" " Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.
Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.
Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; ½, $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, $3.
Tufts, per gross, common worsted, 18c.
Twine, tufting, per lb,, No. 16, 55c.; best mattress, 85c.
Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 1C, $5.
Whip sockets, soft rub., per doz., No. B, $3.50; No. C, $3.75.
" improved, all black, per dozen, $1.75; black, silver top, $2.
" imp., cov. and stitched, per doz., $2; sil. top, $2.25.
Whip socket fasteners, $3.25 per dozen pairs.
Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

Wood-work.
Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.
Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.
" white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.
Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in, diameter, $2 to $2. 25 per set.
Poles, hickory, per dozen, rough, $12; finished, $16.
Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.
Shafts, express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.
Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.
Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.
Seat arms, per dozen pairs, $1.25.
Spokes, buggy, hick. per set, 1½ in. and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.
Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.
Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

Varnishes—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4. carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.50; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.
Piotrowski's Permanent Wood Filling, $6 per gallon.
Paints—Black—Raven's Wing drop, per lb., 45c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.
Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.
Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 50c.; pure Paris, 50c.; Brunswick, 15c.
Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Vermillions—English pale, $1.60; deep, $1.50, German gothic pale, $1.50; deep, $1.50; Chinese, $1.60; Trieste, $1.25; Italian, 45c.; American, 35c.; English Venetian, 5c.; red lead, 15c.
Whites—Pure lead, per lb., 14c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.
Yellows—Pure chrome, L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c.; English chrome, $1.10; French do. $1.20.,
Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.
Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.
Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.
Best Paint Mills—Large, $8; small, $6.50.

IRON AND STEEL.

CORRECTED BY WILLIAM M. WHITAKER,
No. 52 *North Front Street.*

NET CASH.
Tire Iron, Merchant, 3¾ cents per pound; refined, 4½c.; 1x¼. 4¾c. Refined Round and Square Iron, ½ and 9-16, 4¾c.; 7-16 and ⅜, 5c. 5-16, 5½c.; ¼, 5¾c.
Oval and Half-Round Iron, ¾, 5½c.; ⅝, 5¾c.; ½, 6c.
Band Iron, 5½c.
English Refined Slit Rods, 6¼c.
Scroll Iron, ⅞ and 1x3-16, 6c.; ¾ and ⅞x⅛, 6¼c.
Steel Tires, Swedes, 1x3-16, 11½c.; ⅞x3-16, 11¾c.; ¾x⅛, 12c.; ⅝x⅛, 13c.
Spring Steel, 1¼ and larger, 10¼c.
Norway Horse Nail Rods, 8 cents; do., Shapes, 7¾ cents.
American Rolled Horse Shoe Rods, 5½c.
American Hammered Iron, 6½c.
" " Axle Trees, 7c.

VOL. IV.

COACH-MAKERS' INTERNATIONAL JOURNAL,

A MONTHLY PUBLICATION,

DEVOTED TO THE INTEREST OF THE TRADE.

With the commencement of the new volume, (October, 1868,) we shall greatly enlarge and beautify the Journal, making it not only the *largest* but handsomest work of the kind published in this country. Our branch departments are under the superintendence of practical men connected with the branch they represent.

Our fashion plates will be carefully selected, with a view to meeting the wants of all sections of the country, and will be *fully* and *clearly* explained.

There being such a demand for copies of the Journal containing the French Rule complete, and in consequence of our inability to supply them, we have decided to republish it, and will commence with the October number.

Our Price Current of Carriage Materials will be continued in the same fair and reliable manner.

Terms—$3 per year, payable in advance.

Club Rates.—Three copies, $8; six copies, $15; ten copies, $20.

Single or specimen numbers, 35 cents each.

Send all money by POSTAL ORDER, *draft or registered letter.*

Postage on the Journal is *three cents* per quarter, prepaid at the office where the subscriber lives.

Canada subscribers will send twelve cents extra to prepay postage.

☞ Notice.—In remitting, name at the top of your letter your post-office, county, and State. If possible, procure a post-office order on Philadelphia. If a post-office order cannot be had, get a *draft* on Philadelphia or New York, payable to our order. If a draft cannot be had, send a *registered* letter. *Do not send money by the express companies unless you pay the charges.*

Any person having sent a club may add other names at any time during the year. The Journals for a club may be sent to different post-offices. When the directions of a Journal is to be changed, say at what post-office it was received, as well as the one it is to be sent to in future.

I. D. WARE, Editor and Publisher,
Office, No. 413 Chestnut Street.
P. O. BOX 2769, PHILADELPHIA, PA.

HOOVER'S

CARRIAGE BOW-SETTER.

PATENTED MARCH 24th, 1868.

JUST THE THING

FOR

EXTENSION TOPS.

Easily adjusted and never out of order.

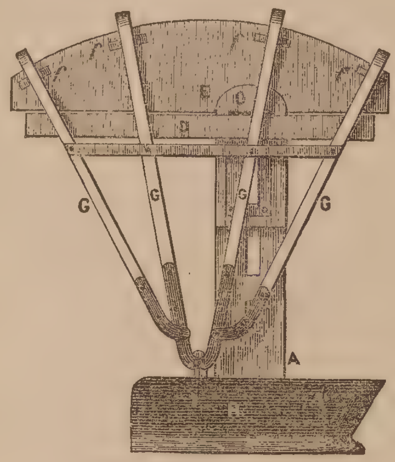


Fig. 1.

Can set a Top any height, round or length.

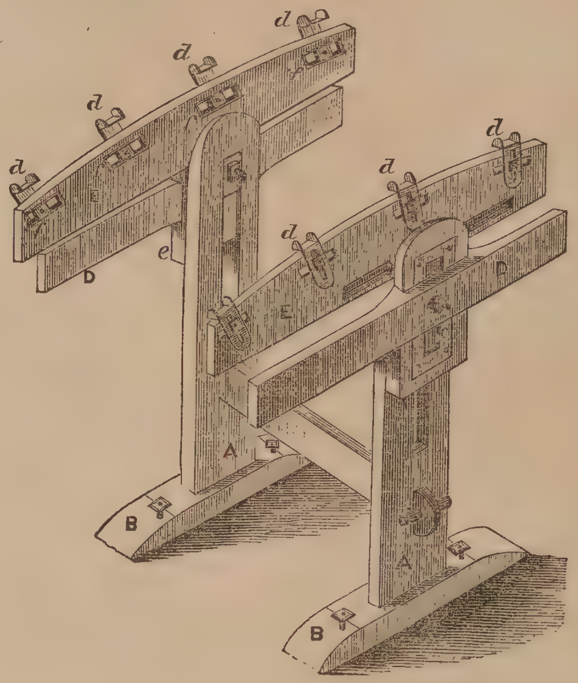


Fig. 2.

IT BRINGS EVERY BOW OUT OF WIND.

Figure 1 is a side elevation of the Machine; showing, also, its position and relation to the Carriage-Bows when in actual use.

Figure 2 is a perspective view of the Machine itself.

A A represents uprights secured to the foot-pieces or sills B B. These uprights are provided with an elongated slot, as shown in Figure 2. C C are sliding blocks, each with a tongue formed upon its inner side to fit in the slots just referred to. The object of these tongues is to serve as guides to the blocks C C, and also to keep them perfectly true and free from lateral motion. The face of blocks C C is provided with a vertical slot, as represented in the drawing. D D are sliding-gauge bars, which are connected to blocks C C by means of bolt *a* and nut *b*. The head of this bolt slides between the slotted piece of metal *e* and slide C, as partly illustrated in Figure 2.

The boards E E are confined between the blocks C C and the uprights A A, with the tongues resting in the grooves, thus allowing the boards E E to slide to the right or left. *d d* represents slotted metal supporters or holders. These holders are provided with projections or ears, in order more effectually to retain the carriage-bows G G in their proper places during the operation of setting them. The boards E E are provided with slots *f f*, and the holders *d d* are secured to said boards by means of screw-bolts passing through the slots, both in the boards and holders.

The bolts are furnished with nuts, to enable the holders to be adjusted to the angle or elevation of the bows.

By means of the gauge-bars D D, the quarter-bars can be accurately adjusted, while the sliding boards E E, with the holders *d d*, enable the operator to give any inclination or elevation to the Bows which may be desirable. The machine, when in use, is secured to the seat H, by means of screws or clamps.

The frame can be removed from the Body by dropping blocks C C, which leaves the Bows in their proper place.

For setting Extension Tops there are two *extra* boards E E, made to suit the top to be set. They are attached in place of boards E E, as shown in cut.

Thus it will be seen that this machine, though perfectly simple in its construction and arrangements, yet possesses every feature necessary in the operation of setting or adjusting Carriage-Bows, and there is not a movement in setting a Top that is not combined in our Top-Setter.

State, County or Shop Rights for sale, or Machines furnished complete.

For further particulars, address

HOOVER & JOHNSTON,
GREEN CASTLE, PENNA.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

Vol. IV.—No. 5. FEBRUARY, 1869. $3.00 PER ANNUM Always in Advance.

THE PROPER CARE OF CARRIAGES.

What can be more pleasing to the eye, among the productions of the mechanic, than a carriage built by a first-class manufacturer, who has spared neither time nor money to place before the buyer a finely porportioned and elaborately finished piece of work?

Weeks and months have elapsed since the draftsman had applied his patterns to the unsightly plank, and transformed it into the graceful form presented.

The wheeler and carriage-part maker added their share of skill. The blacksmith strengthened the weak points, and by sturdy blows wrought into forms of beauty and durability, the stubborn iron and steel. The trimmer, with costly fabrics of delicate texture, rich laces, carpets, &c., arranged for the comfort of the passenger; and, lastly, the painter, through months of hard and perplexing labor, finally put on the finishing stroke, and the carriage stands forth a thing of beauty.

Now this carriage, which is so delicate in its construction, and so easily damaged by heat and cold, and neglect, in many ways on the part of the owner, should be properly taken care of.

But how often is it the case that the carriage is shamefully abused through ignorance or carelessness of the coachman? The owner of a fine private carriage, having provided everything necessary for keeping it in good order, may have in his employ a man who either does not understand his business, or if he does, is too heedless to attend to it properly. While every part of the carriage should receive proper attention, the surface work will require the nicest judgment.

One of the most attractive features of a carriage is the exterior finish. It is well known that the painting either adds to, or detracts from the appearance according, as it is well or poorly executed. Varnish, which forms the lustrous surface, is easily soiled. The fine gloss, for which the carriages of America are noted, is so easily dimmed by careless washing, and the coating of varnish itself ruined by scratches and hand-marks, that we have thought it would be well for manufacturers to have printed instructions ready to accompany every carriage sold, giving full instruction as to the proper care of the carriage. To the majority of city customers this might not be necessary, but to a large class of buyers it would be beneficial, and often save both parties from considerable ill-feeling.

We remember an instance to the point.

A few years ago a wealthy farmer purchased a fine carriage, in a certain city, in Kentucky. After enjoying a drive out with his family, he took the carriage to a creek, drove in, and with an old stub broom scoured the mud off, working no doubt in good earnest, (judging from the appearance of the job when it was brought back to the shop.) The surface was ruined. The back panel looked as if some thoughtless school boys had attempted to draw a map of the world on it, with nails and brick-bats.

The owner hurried into town, and charged Mr. ——, with having finished his carriage with inferior varnish. The scene which ensued may easily be imagined. Angry words were exchanged, but there was but one remedy, the carriage had to be re-varnished; the customer footing the bill.

A dry, clean carriage house, entirely separated from any stable manure, should be the first thing attended to. A closet to keep the harness free from dust and dirt, should always be found in a well-planned carriage house.

A wheel-jack, buckets, sponges, chamois, wrenches, cover, feather duster, axle grease, &c., should have each an appropriate place.

The Washing.—When a carriage has been run in the summer season, use the water freely, so as to remove the dust or mud before using the sponge and chamois skin. We have seen carriages ruined on the exterior by scratches in the varnish, caused by carelessness or ignorance in this particular. Mud should not be allowed to dry on the varnish, if it can be avoided. The English varnishes, with which most carriages are finished, retain their elasticity for a great length of time, and mud or filth of any kind drying on them, fastens upon the body of the varnish, and the stains cannot be removed without re-varnishing.

In the winter season it is not best to wash off the mud when the water freezes while being applied. *Warm water* should *never* be used in winter time, as it will be apt to remove the varnish, or cause it to crack and peel off.

We have seen a great deal of bad feeling, and sometimes angry disputes, arise between the manufacturer and the owner of a coach, growing out of thoughtlessness on the part of the coachman who had allowed water to freeze on the panels.

Greasing.—For greasing the axles and fifth wheel use castor oil. It is not necessary to put on a great deal. Frequent applications, and less in quantity, should be the rule. For when there is an excess of oil, it oozes out, and finds its way on to the hub, and from the hub is thrown over the wheels, when the vehicle is in motion. The grease is then liable to be taken up on the sponge when washing, and also on the chamois, giving a vast amount of trouble and vexation. The fifth wheel should be looked after, and not be allowed to become entirely dry.

The Leather.—Enameled leather should be kept soft and pliable, with sweet or sperm oil. It will only be necessary while the leather is new to cleanse the top and curtains from dirt, and rub them with a greased rag. When the leather shows signs of drawing up and becoming hard and lifeless, wash it with warm water and castile soap, and, with a stiff brush, force the oil into the leather until the grain is filled.

Sponges and Chamois.—Two sponges and chamois should be kept on hand—one of each for the body and gearing. The reason for this is, that after the carriage has been used there is a liability to get grease on the sponge and chamois when cleansing the wheels and front axle bed. Another reason of some importance is, the gearing soon destroys a sponge, and makes it worthless for washing large panels.

Wrenches.—Beside the axle wrench, a monkey wrench will be found of great service in looking after the nuts at those points where there is the greatest liability to accidents. Hundreds of dollars have been spent in repairs, limbs broken, and even lives lost, through neglect to inspect the carriage before starting out.

The Cover.—When the vehicle has been washed and housed, it should be covered with an enameled cloth cover, fitted to it so as to keep it free from dust, inside and out. To preserve the wood and save expense, it should be re-painted or varnished once a year. There is no economy in saving a few dollars this year on your carriage, and spending three times as much the year following.

While we have thus far spoken only of the care of the carriage after it had passed into the hands of the purchaser, a few words may not be out of place to the builder with reference to the ware-room. In cities like New York, Philadelphia, Wilmington, Cincinnati, &c., we find the ware-rooms all that could be desired; but in too many factories we find little or no pains taken to keep the finished work free from dust, smoke and the finger-marks of persons who are strolling about, buying nothing, but leaving their finger-marks, or writing their names in the dust which may have settled on some of the panels. We have in our mind a model wareroom. It is well lighted, clean and neat. The doors and windows are closely fitted, excluding dust and smoke. A double floor, between which is a layer of plaster, prevents the smoke from the smith shop from finding its way into the room. The work is completed before being lowered down, and no one is admitted but those who are on business. The room is kept quiet, and no finger-marks are left on the work by mere sight-seers.

THE WISE MAN OF GOTHAM

In perusing a late number of the *Monopoly Magazine* we find a column devoted to a "Ci-devant Editor," which we presume means ourself. It is gratifying to be considered of such great importance as to call forth a notice from the Wise Man of Gotham, although it may be intended for a left-hand compliment. We have carefully scrutinized the article, and find that a considerable portion of it would redound to our advantage, *provided* the said publication was blest with any considerable circulation, and the writer was a man in whose utterances the coach-making fraternity could place any confidence.

The article in question was doubtless written in answer to ours in the December number of the Journal. It bears the marks of a man easily excited, rushing headlong into difficulties, from which it will be difficult to extricate himself. He quotes a portion of our article, and then boldly asserts it to be false, and volunteers to *prove* it to be so. We do not purpose to follow the example of this wise man, and let our pen run wild even in "execrable English," but to do what we do calmly. We make no assertions which we are unwilling to stand by, and leave to a discerning public to judge. As to proof of the correctness of our assertion, we could, were it necessary, bring scores of reliable men to vouch for. He further sets himself up as a judge of what is our duty, and accuses us of not performing it. "Physician, heal thyself."

For the benefit of this very wise man we will inform him that we did *not* write a letter to the Convention in Troy excusing ourself from attendance, for we had no business to call us there, having resigned our position as Secretary, and transferred all property in our possession to the proper authorities, taking their receipt therefor. So much for the evidence of the editor's informant, by whom he is able to *prove* so very much. We feel much obliged for the assertion, gratuitously given, that the Journal was "well established" nearly a year ago. The editor certainly must have come to his senses in a measure, and spoken his "honest convictions" for once. How different from his former articles, where he has endeavored to lead his readers to believe the life of the Journal was of short duration. We cannot, however, attribute it to "purity of motives," that led him to make the acknowledgment; in fact, we are inclined to the belief that it was an unintentional compliment.

How he flutters when mention is made of the manner in which poor Saladee was wronged by his *employees.* We think it would require something more than a reference to those who have known him for years to satisfy the public there was no foundation for the wide-spread and undeniable facts connected with the starting of the Gotham magazine. It is evident the editor became much excited when he reached this point, for his fertile brain ceased to perform its functions, and he gives over in despair, failing to notice the remaining points in our article. "Pity the sorrows of a poor old man," &c. Really Friend (?) S., we pity you—having been taught from our youth to respect those older than ourselves—but if you will permit us, we would advise you to not allow yourself to become excited over imaginary evils. It is not our purpose to harm you. If the public prefer our journal to yours, do not blame us for it, but rather try to make yours acceptable by giving more attention to it, and selecting good assistants, and then, if it does not prosper sufficiently, have an advertisement put in the Journal. This will surely succeed, for our advertisers speak in the highest terms of the benefits they derive. If this will not save you, all other efforts will be in vain—you had better give your *whole* attention to your *other* calling. We make no charge for this advice, but give it to you willingly as one interested in your prosperity.

☞ The Singer Sewing Machine for the trimming room.—Read advertisement.

HO! FOR THE NEW ENGLAND STATES.

On Tuesday, Dec. 1st, at eleven o'clock, we faced the cold, searching December winds, and entered again upon the work of canvassing for the Journal. In order to properly push this business of canvassing, one must cut loose from every idea of pleasure. To the cold driving rain-storm you must say, ha! ha! When the skies are leaden, and a snow-squall dashes furiously about your head, chilling your blood, and awakening thoughts of home, where wife and children are clustering comfortably by the fire, while you are among strangers, and a *stranger* to comfort, one must smile blandly, and imagine that every thing looks lovely. Arriving at New York at 3 o'clock, we were greeted by a cold nor'wester which disputed every inch of our way to the landing of the Bristol Line of Steamers.

Having boarded the magnificent steamer Providence, we gave the "Purser" a quietus in the shape of a five dollar greenback, which entitled us to remain on said steamer until she should arrive at the City of Bristol. *We felt highly honored in being permitted to ask the* "Purser" a few *questions,* (if he was short as pie-crust in his answers,) *for he wore a suit of dark blue, blazoned with wide gold bands on the coat cuffs, also, a gold band on his cap. We felt our inferiority while standing in his crusty presence.* There, he has our money, we have his ticket of leave to stay aboard, and we are now even. "All aboard." There is a hurrying to and fro, hasty good byes are exchanged, the ponderous machinery is aroused from its sleep; and with a power, wonderful to contemplate, moves the floating palace rapidly on her course.

The Bristol line runs two steamers. The Providence and Bristol costing originally over a million dollars each. The cabin of the Providence is superb, and must be seen to be fully appreciated. Meals are furnished on the European plan. We arrived at Bristol at half-past two on the morning of the 2d of December, and at half-past four took the steamboat train for the City of Providence, Rhode Island, which we reached in one hour. The City is very well built, and we should think a pleasant place to reside. The carriage business is carried on to some extent, but the shops are generally small, and not as well adapted for manufacturing as they might be. There are some eight or ten good shops. The principal ones are: Allen Green, Olney Reed, J. E. Crandall & Co., Moulton & Remmington, Euclide Godrow and Adolphus Welcome. We called on friend Fiske, who laid off his *regalia*, and volunteered to show us around the city. Having called at all the shops and presented the claims of the Journal as a first class publication, we were not surprised to be ordered to write a good many names, as subscribers. Friend Fiske will accept our thanks for his kindness on that bitter cold day when we canvassed the city.

Newport being the next place on our list, we started on the 3d, at 2.40, P. M., for that city by the steamer Newport. After a delightful ride through Narragansett Bay, at 5 o'clock we rounded in to the Ancient City of Newport.

Coming in from the sea, round Point Judith a few miles, brings the traveler into the waters of Narragansett Bay, where he passes between Fort Wolcott on Goat Island, and the strong hold of Fort Adams upon Breton Point on the right, and enters the harbor of the ancient town, once among the commercial emporiums of the west."

NEWPORT IN 1769.

As late as 1769, Newport outrivaled New York in her foreign and domestic commerce. At this time the town was in the zenith of her commercial prosperity. She had engaged in the foreign trade about 200 vessels, and nearly 400 coasting vessels, including a regular line of London packets, and employing no less than 2,200 seamen. New York, New Haven, New London, &c., depended entirely on Newport as a market to supply themselves with foreign goods.

DURING THE REVOLUTION.

In the Revolution the British long held possession of Newport, during which time, and at their departure, it became almost desolate. Before leaving they destroyed 480 buildings, burned the light house, cut down all the trees, broke up the wharves, used the churches for riding schools, and the State House for a hospital, and carried off the church bells and the town records to New York, and reduced the population from 12,000 to less than one-half.

NEWPORT A GREAT SUMMER RESIDENCE.

Newport is the most elegant and fashionable of all American watering places. In the summer season the city is thronged with visitors. The hotels are unable to furnish good accommodations for all who apply; and it is not unfrequently the case that the *upper crust* have to take shockingly mean accommodations, which neutralizes the pleasures they were seeking.

Commodore Perry was born in Narragansett across the bay. His remains rest in Newport.

FRANKLIN'S PRINTING PRESS.

Franklin's Printing Press, which his brother James imported in 1720, was, until 1862, in the office of the Newport *Mercury*, a paper established in 1758 by James Franklin, and which is still published by F. A. Pratt. The press was kept and honored as the one on which the great Benjamin worked when learning his trade. It is now in Boston. The Red Wood Library was erected in 1748; among its collections are 84 large volumes, presented by the King of England.

THE OLD CHAIR OF STATE.

The old chair of State, in which Govenor Benedict Arnold sat at the reception of the charter in 1663, when it was proclaimed in the presence of all the freemen of the colony at Newport, is in the possession of the Gould family.

The principal carriage makers at Newport are, W. R. Thomas and Achilles Stevens. There are three or four small shops, which do repairing principally. The four branches are carried on separately, as a general thing. At this season of the year the city is very quiet. and business dull. We took a stroll down to the bathing beach, and had a view of old ocean, and heard the waters, roar as the long swell dashed upon the beach. Everything looked dreary and desolate.

The miserable shanties along the beach were closed. The refreshment stands all empty and filthy, the glass broken out, and desertion stamped upon everything. From Newport we visited Fall River, Massachusetts. Leaving Newport, on the Old Colony and Newport Railroad at 3 o'clock, we were in the busy, bustling town of Fall River at 15 minutes of 4. The scenery through this section is not very attractive. The face of the country is hilly and broken. Mount Hope, near which King Phillip fell, may be seen in the distance as the traveler is whirled along the route. Fall River was frozen over, and the boys enjoying themselves skating over the crystal ice.

FALL RIVER.

There is fine water-power here, which is put to good use by the enterprising citizens. There are several large mills, fine business blocks, good stores, and three carriage shops. Mr. Eames carries on the most extensive, and builds some first-class work. A new shop has lately been erected, by two honest, hard-working men, Messrs. Robinson and Edmonds; we wish them success. By the way, they have a body maker by the name of *Cozzens*, an old man, who is an oddity. We will not soon forget his free and social manners, but, as a friend, would advise him to be a little more chaste in some of his jokes.

NEW BEDFORD.

We arrived at New Bedford on Saturday, Dec. 5th, at 10 o'clock. In going from Fall River to New Bedford, the traveler has to double, as it were, on his tracks. On arriving at Myrick's, you will change cars, and go down into the ragged end of the State, where is situated the beautifully built little City of New Bedford. While New Bedford is celebrated for her whale fisheries, and the most of her wealth has been derived from that source, still she has some mechanics in her midst, of whom she may be justly proud. We speak of her carriage manufacturers.

It was a stormy day that we arrived here—cold, snowy and cheerless. The winds seemed to us to be trying how hard they could blow against a *thin stranger*. But we soon espied the familiar names of Forbes & Sears, and on entering, was kindly received, and immediately made to feel perfectly at home. Messrs. Forbes & Sears have a fine shop, and employ first-class hands. The shop is kept in good order, and everything wears the appearance of business.

They were busy on sleighs the day we called, and the jingling of bells made pleasant music.

There are five or six carriage manufactories here, the leading ones being Forbes & Sears, Geo. Brownell, and Brownell & Ashley; the factory of Mr. Geo. Brownell being the largest.

THE BUILDING

"Was originally a two and a half story structure of stone masonry, and is located on the corner of Third and Cannon streets, in a business portion of the city. The main building is 100 by 50 in area; to this has been made an addition, which extends from the main structure, a distance of 130 feet on Cannon street; is 30 feet in width, and two stories, besides the attic, in height. There is, also, a second wing, about half the size of that first mentioned. The whole building covers an area of 11,160 feet. The entrance to the shops are in the rear of the office. From either department, the employees may reach the office direct."

We happened to be in the office on Saturday night, and saw the manner of paying the hands; it was new to us, and, probably, may not be uninteresting to many of our readers. A desk, in the back corner of the office, near a window, is kept for the purpose. It contains a drawer, which is divided into several small apartments; each man's money is placed in an envelope, with his name written on it, and placed in the drawer; the window is raised, and a small desk, (made for the purpose,) is placed in the window.

The employees on arriving at the window receive an envelope with the amount of their weeks wages, and a receipt enclosed. Every hand is required to receipt for his wages. There is no crowding, no confusion.

Mr. Brownell showed us through the entire factory, taking considerable pains to point out the advantages derived from the systematic arrangement of the workshops. For the kindness shown us, in many other respects, he will please here accept our thanks. We accepted an invitation from him to attend church on Sabbath morning, where we heard a very able discourse by Rev. Mr. Potter, (Unitarian.) The congregation were mourning the loss of a very wealthy member, whose liberality to the poor of New Bedford was a prominent trait of his character. He proved his faith by his works, and being full of years he sank to rest and his works do follow him. After the services we accompanied Mr. Brownell to his residence, where we were agreeably entertained.

But, for fear of growing tedious to the reader, we will close by saying that we have visited the Cities of Taunton, Boston, Lowell, Lawrence, Haverhill, West Amesbury, South Amesbury, Amesbury Mills; Dover, New Hampshire; Biddeford, Saco, Portland, Bath, Lewiston, Gardiner, Augusta, Kendall's Mills in Maine; Portsmouth, Concord, Nashua, New Hampshire; Worcester, Palmer, Westboro, Belchertown, Springfield, &c., Mass., which we will speak of hereafter.

C. W. V.

PERSONAL.

We were much pleased, a few weeks since, with a visit from our friend, Mr. G. B. Hamilton, who has done such good service in distributing the Journal in different sections of the country. Being a man of energy and perseverence, he has proved himself quite an auxiliary to the Journal. Being connected with a large and reliable paint and varnish house in this city as traveling agent, his opportunities for speaking a good word for us are very great, and we have good reasons, judging from the past, to expect much of him in the future.

The firm for which he is traveling, Messrs. Felton, Rau & Sibley, we are personally acquainted with, they having advertised in the Journal ever since it started, and do not hesitate to speak in the highest terms of the benefits they have and are receiving thereby. Keeping a stock of good goods, and being reliable men, they seldom lose a customer that the Journal brings to them. We were informed by Mr. Hamilton that they have been adding to their stock of varnishes, and are now furnishing a very superior article of IMPLEMENT VARNISH, suitable for wagons, farming implements of all kinds, &c.

It is a source of pleasure to us to see our advertisers prospering, and we hope their receipts may increase tenfold through the influence of the Journal.

COACH-MAKING IN THE NEW ENGLAND STATES.

Having recently visited the principal cities and towns in New England, where carriage-making forms an important part of the manufacturing interests of that enterprising people; we inquired somewhat particularly as to the state of trade, and the prospects for the spring. The fall trade was not all that was desired. During the month of December, business was hampered by the backwardness of the season. Depending, as they do in that section, on the sleigh trade, the absence of sufficient snow to make good sleighing caused a stagnation, which was seriously felt by dealers.

A majority of the shops which we visited were doing but little, and running only eight hours a day. The number of sleighs manufactured was fully equal, if not in excess, of the demand.

At Boston, Portland, Concord, and other cities of less note, the leading shops were running well nigh their full force of hands, and preparing for the spring—hopefully at least. A great many small shops were standing still, doing absolutely nothing. With the revival of the Southern market, which is not far distant, we may look for an increased demand for carriages.

During the war, when money was abundant, and spent so lavishly for personal adornments, and pleasures of every kind, it was but natural the demand for carriages should be fully equal to the supply. The high prices paid, and ready sales, gave to the business a very promising appearance. But with the closing of the war, and the return to a *more healthy* condition in money matters, (less to spend,) there was a corresponding falling off in the demand for every article classed as a luxury. The Southern market having been swept away in the general ruin which came upon the South, the supply of carriages became in excess of the demand.

From the agricultural reports we find the South has partially recovered from the effects of the late insane "struggle for independence." They have raised enough for home consumption; their cotton commands a good price, and with the return of prosperity they will buy fully up to their means. With good crops generally in the North, political excitements on the wane, and the almost universal confidence reposed in the newly elected President, we prophecy good times. C. W. V.

NEW ADVERTISEMENTS.

J. G. Rouse & Co., N. W. corner of Fourth and Arch streets, Philadelphia, dealers exclusively in Carriage Goods, occupy one of the best stands in the city, fronting on two public streets. The building is five stories high, a cut of which will be inserted in the advertisement next month. Mr. R., having been engaged in the business for a number of years, is well acquainted with the wants of carriage manufacturers, and is ever on the alert for anything new and useful. We understand they are having manufactured from an entirely new pattern, given them by one of the best mechanics in this country, the bent bed piece for four-spring carriages, throwing the king or body bolt eight inches forward, instead of 5½, as formerly, allowing the wheel to strike so much further front—a thing desired by all builders of heavy work. We bespeak for Rouse & Co., a good share of patronage from the readers of the Journal.

Wm. Shields, proprietor of the Girard Bolt Works, Twenty-third street, above Race, is doing an extensive business in his line. The Philadelphia bolt has become noted all over the country, and needs no recommendation from us. Mr. S. will be found ready at all times to fill orders from reliable persons.

R. B. Porter & Son, 78 West Pratt street, Baltimore, Md., general dealers in carriage materials, having associated with them Mr. J. A. Adams, formerly of this city, are prepared to do an extensive business, and are deserving, and we believe receiving a full share of trade. Their card will be found in our advertising columns, and we trust our readers will not overlook them.

M. Saunders, Hastings, on the Hudson, axle manufacturer, favors us with an advertisement. It is well known among carriage mannufacturers that there is no better axle made than the Saunders axle. Any who are not fully satisfied on this point would do well to try them.

Ætna Axle and Spring Co., Bridgeport, Conn. The Bridgeport springs and axles stand A No. 1 among those whose business it is to know, and it is gratifying to us to be able to place the card of the "Ætna" beside the others. Give them a call, friends, and prove the truthfulness of their promises to furnish a first-class article at a very reasonable price.

T. Skelly, Philadelphia Carriage Bolt Works, Twenty-fourth street, below Callowhill, Philadelphia, is deserving of a good share of trade. Attending closely to his business, and manufacturing a bolt fully up to if not a little above the standard Philadelphia carriage bolt, he will doubtless be amply repaid for the extra care and supervision of his establishment. Don't forget to read carefully his advertisement on third page of cover.

Woodburn, Smith & Co., 114 and 116 Green street, St. Louis, manufacturers of the Sarven patent wheel, spokes, felloes, and carriage wood work of all kinds. This advertisement was inserted in last issue, but came too late for any notice in our columns. We trust our friends will remember them as patrons of the Journal, and give them at least a trial, and if they do not furnish as good an article for as little money as any other establishment, cease to patronize them, and send us a notice of their shortcomings.

Jamestown, N. Y., January, 1869.

Mr. Editor.—I would like to inquire through the Journal if the style of plating on carriages, so much in vogue a few years ago, is coming again into fashion?

Also, are oride carriage bands much used and where can they be obtained? K. K. H.

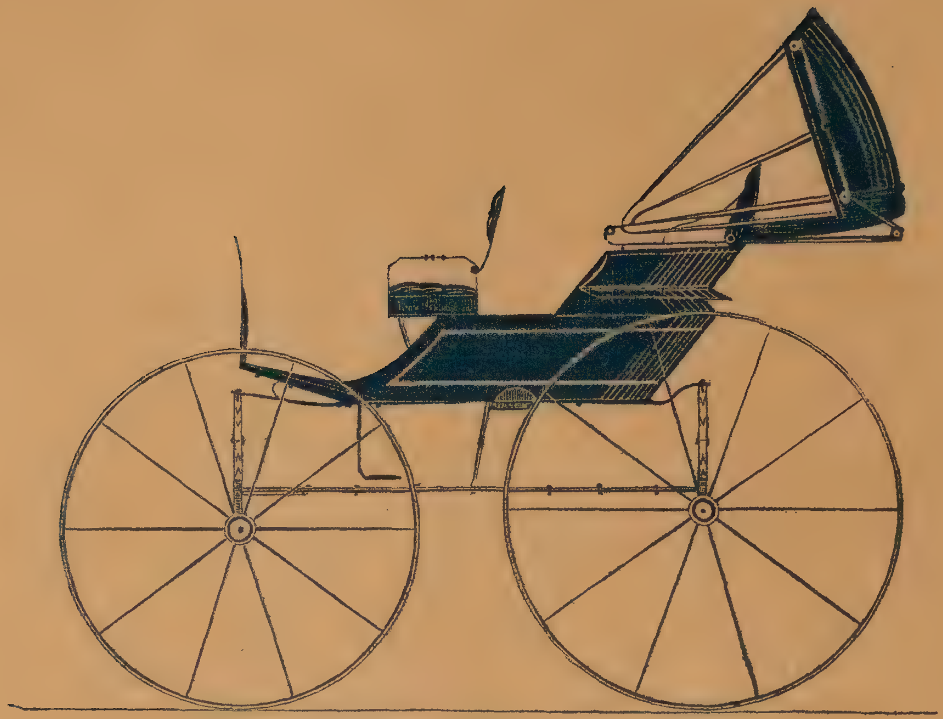
Answer to question 1st.—There is a tendency toward a greater display in the finish of carriages at New York and New Haven. A great deal of plating is used, but not to so great an extent as formerly. Silver and Princes metal are both used, and give to the vehicle a very rich appearance.

The oride band is in great favor, and can be purchased of manufacturers of carriage mountings. See *Directory* in the back part of the Journal.

OUR NEW CHART.

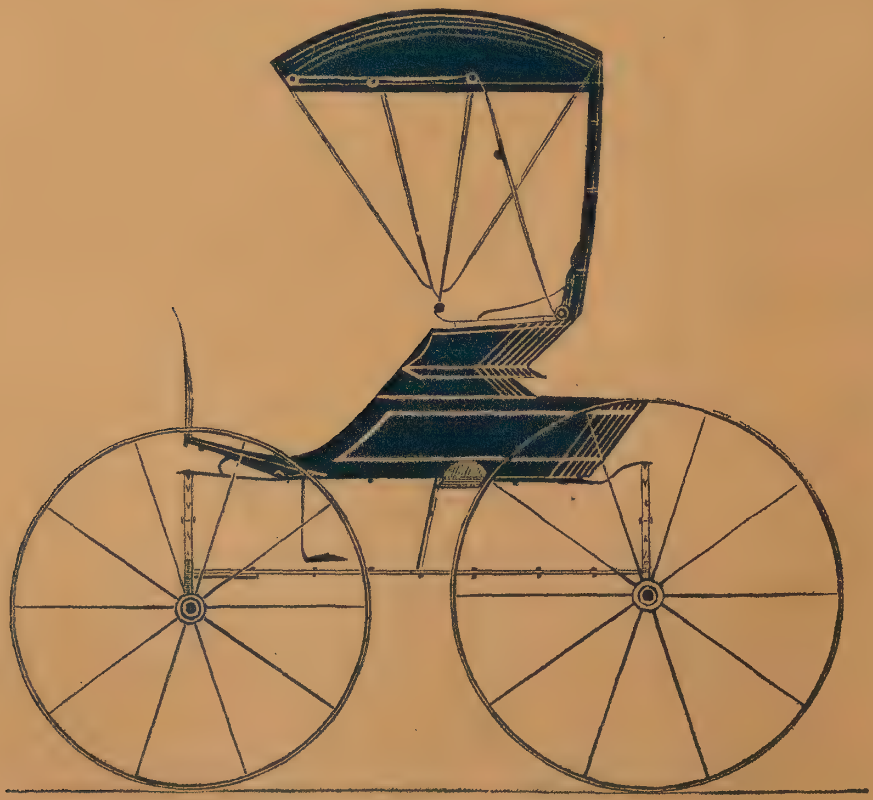
We think we can safely say we now have the handsomest OFFICE CHART ever offered to the public. It is 24x30 inches, printed on lithograph plate paper of good quality, containing twenty-eight (28) cuts of light and heavy work of the latest styles, with oval centre for manufacturer's card. Though an exceedingly difficult job to execute properly, we consider we have been very fortunate, for a better worked job we never saw, each cut having been brought out clear and distinct. Every Coach-Maker should have one in his office.

If any who have heretofore notified us to send to them fail to receive them, they will please send us word immediately, for with the many orders received the past month, and the charts not being ready when the orders came, we may have possibly overlooked some of them; if so, bear with us, and inform us of the fact. We have a good supply now on hand, and will fill all orders that come immediately. Price $1; sent on a roller, post-paid.



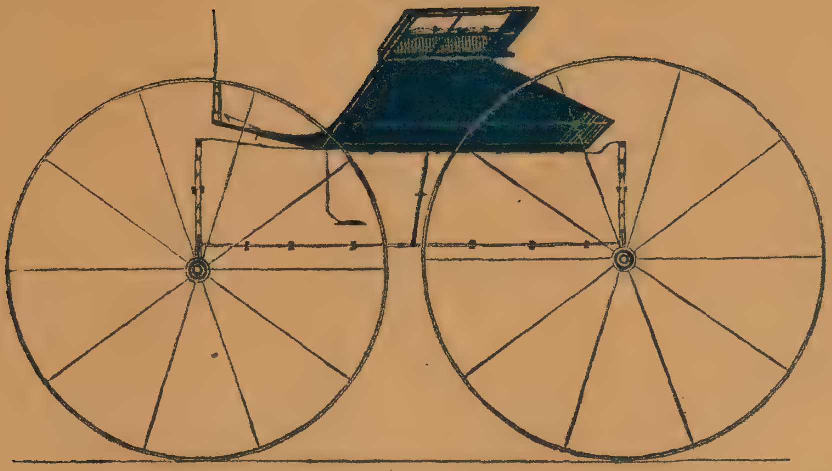
JUMP-SEAT ÆTNA BUGGY.

Plate No. 17.—Half-inch Scale.—Explanations on Page 69.



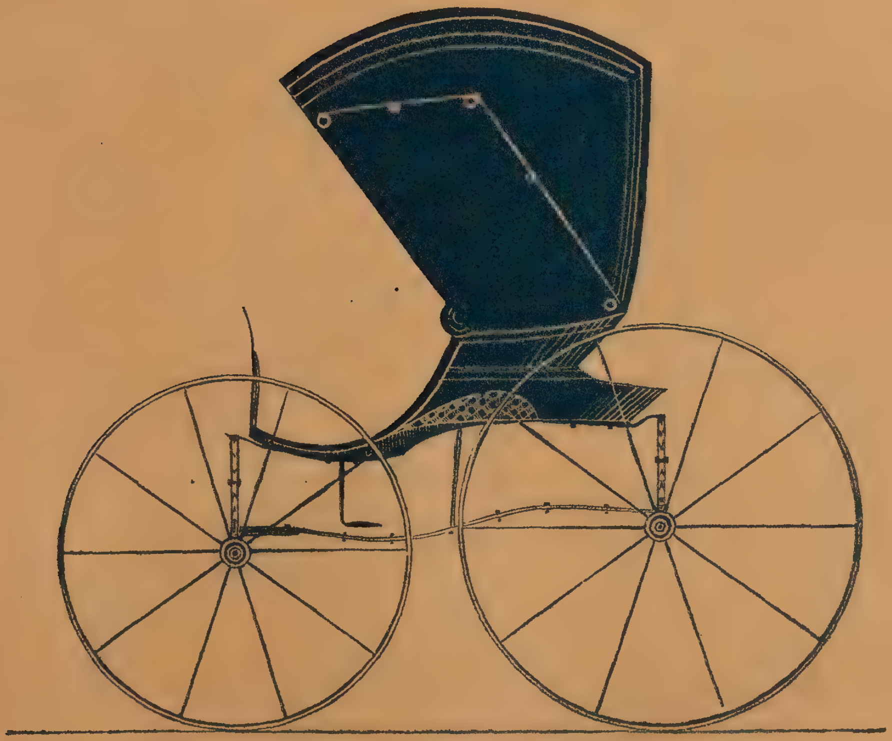
JUMP-SEAT ÆTNA BUGGY.

Plate No. 18.—Half-inch Scale.—Explanations on Page 69.



GRANT BUGGY.

Plate No. 19.—Half-inch Scale.—Explanations on Page 69.



IMPROVED GODDARD BUGGY.

Plate No. 20.—Half-inch Scale.—Explanations on Page 69.

TO CORRESPONDENTS.

We are under the necessity of reminding our friends who write to us on business in which they alone are interested, to enclose a postage stamp. Some do so, and we take special pains to attend to them first, and from the heavy expense to us for postage, and, in most instances, for letters that are for the sole benefit of the person to whom we send them, we fear we shall be obliged to say that we will not give them the desired information unless they pay the charges. We often receive inquiries that take hours for us to ascertain, and then return an answer at our own expense. Three cents is small, it is true, but when a person receives such a mail from the office every day as we do, and are obliged to answer most of them, the postage is no small item.

Again, persons send to us to purchase certain articles, without sending the money, and request them sent by mail. This we have done, and, in some instances, have received no return whatever, and are out of pocket for the article and postage also. It is impossible for us to distinguish between the honest and dishonest by correspondence alone, and hereafter those who expect us to give attention to their orders *must* send the money, unless the article can be sent by express, C. O. D., and they are willing to pay for collecting. It would be much better if all would send the money with the order as our Price Current will be sufficient guide as to the amount required.

We are willing and ready to serve our subscribers in any capacity, so far as our limited time will allow. We feel gratified at the marked expressions of confidence from all sections of the country, and shall ever endeavor to merit them; but our pockets are not deep enough to pay so dear for their continuance as we are now doing. Sending us $2 or $3 for the JOURNAL we hardly think ought to entitle the person to draw on us every few weeks for postage, the profits are not large enough, so please don't forget; for we do not wish to talk *plain*, and say we *will not* answer them.

Fashion Plates Explained.

JUMP-SEAT ÆTNA BUGGY.

PLATES Nos. 17 and 18.—We have given this beautiful design in two views. No. 17 with the seat moved back, and front seat turned out, giving it the appearance of a light half-top barouche. No. 18 is the same carriage, with seat jumped forward, making it, to all intents and purposes, a fashionable buggy, without any of the marks so usually seen on shifting-seat jobs.

The "*Jump-Seat*," which was first patented some years ago by G. & D. Cook & Co., of New Haven, Conn., has been in use, more or less, since then, both East and West, combining in one vehicle the advantages of a single or double-seated carriage, without adding much to the size or weight. The "*Jump-Seat Buggy*" is all that could be desired by persons of limited means. There are several patents out for constructing the *front seat*, which plays an important part in a *jump-seat buggy*. We hope soon to be able to present our readers with the advertisement of the *best* one in use.

The time is not far distant when the jump-seat will be considered indispensable to a job intended for one or two seats. In the East they are being manufactured extensively. One shop at Portland, Me., is known in that city by the name of the "jump-seat shop."

A light plate ⅜ inches wide, should be screwed on the top of panel, which will protect it when getting in and out, with the seat thrown back. The front seat, when turned out, is secured by a heavy hook.

DIMENSIONS: Width of seat to take 42 or 43 inch bows. Hubs: 4¼ diameter, 6½ long. Front band, 3 inches; back band, 3⅝. Spokes: 1 1-16. Tire: 1x3-16, steel. Depth of rim: 1⅛. Axle: 1 inch, steel. Wheels: 3 feet 10 inches, and 4 feet 2 inches. Track: 5 feet. Springs: back, 38 long, 4 plates 1½ inches, 9 inch opening; front, 37 long, 3 plates 1½ inches, 9 inch opening. Steel heavier than medium size.

TRIMMING: Cloth.

PAINTING: Back seat and panels, crimson lake. Mouldings: striped with Malori green, glazed with Emerald green. Gearing: black, striped with ⅜ line of crimson lake, edged with fine line of green. Add a small quantity of lake to the green, so as to remove the raw appearance which that color has where much striping is put on.

PLATING: Prince's metal. Oride bands, outside painted with the carriage. Nuts capped and plated.

"GRANT" BUGGY.

PLATE No. 19.—An original design for a no-top buggy, contributed by our body draftsman, who claims for it points of originality worthy of attention.

DIMENSIONS: Half width of body, 20 inches on seat; three-quarters, 28 inches on seat. Top and centre rails of seat are bent. Centre, ⅜ by ½ inch; upper, ¾ square. The front duster running up and glueing to front pillar of seat. Hubs: diameter 3¼, 6 inches long. Front band, 2¼; back band, 2⅝. Spokes: ⅞. Tire: ¾ by ⅛, steel. Rim: ⅞ deep. Axle: ¾, steel. Height of wheels: 4 feet, and 4 feet 4 inches. Track: 4 feet 8 inches. Springs: back, 37 long, 3 plates 1¼, 9 inch opening; front, 36 long, 3 plates 1¼, 8½ inch opening.

TRIMMING: Gray cloth, with patent leather welt.

PLATING: Handles, inside of bands, nuts and caps, fire gilt or gold.

IMPROVED "GODDARD" BUGGY.

PLATE No. 20.—A very graceful, genteel top buggy is here given. Being somewhat lighter and more gracefully proportioned than the standard "buggy" of Boston, we feel confident that it will find admirers among many of our enterprising manufacturers.

Being designed expressly for the JOURNAL, we place it before our patrons with no small degree of pleasure. The cleft in the side can be either sunk or finished with moulding.

DIMENSIONS: Width of seat to take 43 inch bows; depth of seat, 20 inches, with solid back 18 inches high; solid wood arms on inside of top for trimming. The depth of seat may seem large, but it is intended for spring back and spring cushions. Skirting of seat made solid with the body, projecting from the side ¼ inch. Wheels: hubs, diameter 4⅛, 6½ long. Front band, 2⅞; back band, 3½. Spokes: 1 inch. Tire: ⅞ by 3-16, steel. Depth of rim: 1⅛. Axles: ⅞, steel. Springs: back, 38 long, 3 plates 1½, 9½ open; front, 37 long, 3 plates 1½, 9 open. Track: 5 feet. Height of wheels: 3 feet 10 inches, and 4 feet 2 inches.

TRIMMING: For physicians, use leather trimming; ordinary, use cloth.

PAINTING: Body and gearing black. Mouldings: striped olive. Cleft in the side: plaid or striped. Gearing: striped ¼ inch line of olive, distance lines of pale orange. Fronts of spokes and hubs fine line of gold.

We shall, in the next number, give an engraving of Spring Style Clarendon Brett. Also, one of Caffrey's Celebrated Skeleton Trotting Wagons.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

For the Coach-Makers' International Journal.

COLOR.

BY J. H. T.

Color is defined to be a property inherent in light, whereby, according to the different sizes or magnitudes of its parts, it excites different vibrations of the fibres of the optic nerve, which, being propagated to the sensorium, affects the mind with different sensations. Or it is defined to be a sensation of the soul, excited by the application of light to the retina of the eye, and different as that light differs in the degree of its refrangibility, and the magnitude of its component parts. So that in the former view, light is the subject of color, and in the latter it is the agent.

The opinions of authors, both ancient and modern, have been various with respect to the nature and origin of the colored body, and that it does exist independently of light, is the opinion of the followers of Aristotle.

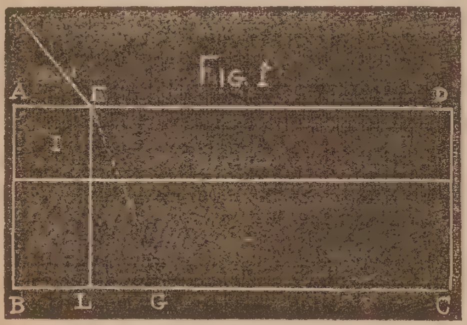
The Cartesians came, indeed, something nearer to the truth, who owned, that as the colored body is not immediately applied to the organ to occasion the sensation, and that as no body can affect the sense but by immediate contact, the colored body does not excite the sensation of itself, or contribute anything to it, otherwise than by moving some interposed medium, and by that the organ of light.

They add, that as we find that bodies do not affect the sense in the dark, light only occasions the sense of color by moving the organ, and that colored bodies are no farther concerned, than as they reflect the light with a certain modification; the differences in their colors arising from a difference in the texture of their parts, whereby they are disposed to reflect the light of this or that modification.

But it is to the incomparable Sir Isaac Newton we owe a solid and consistent theory of colors, built on some experiments, and solving all the phenomena thereof. His doctrine is as follows:

It is found, by experience, that rays or beams of light are composed of particles very heterogeneous or dissimilar to each other; *i. e.*, some of them, as is highly probable, are larger, and others less.

For a ray of light, as E F, (*see figure* 1,) being received on a refracting surface, as A D, in a dark place, is not wholly refracted to L, but split, as it were, and diffused into several little rays, some of which are refracted to L, and others to the intermediate points between L and G; *i. e.*, those particles of the light which are the most minute, are, of all others, the most easily and most considerably diverted by the action of the refracting surface, out of their rectilinear course toward L, and the rest, as each exceeds another in magnitude, so it is with more difficulty, and less considerably turned out of its right line, to the points towards L and G.



Now each ray of light, as it differs from another in its refrangibility, so does it differ in color from it; this is warranted by numerous experiments. Those particles, for instance, which are most refracted, are found to constitute a violet color. In all probability, the most minute particles of light, thus separately impelled, excite the shortest vibration of the retina, which are thence propagated by the solid fibres of the optic nerves into the brain, there to excite the longest sensation of violet color, as being the most dusky and languid of all colors.

Again, those particles which are the least refracted constitute a radius of a red color; the longest particles of light excite the longest vibrations in the retina, so as to produce the sensation of a red color, the brightest and most vivid of all colors.

The other particles, being in like manner separated, according to their respective magnitudes, into little rays, excite the intermediate vibrations, and thus occasion the sensation of the intermediate colors, much in the same manner as the several vibrations of the air, according to their respective magnitudes, excite the sensation of different sounds.

To this may be added, that not only the more distinct and notable colors of red, yellow, blue, &c., have thus their rise from the different magnitudes and refrangibility of the rays, but also, the intermediate degrees or tints of the same color, as of yellow up to green, of red down to yellow, &c.

Further, the colors of these little rays, not being any adventitious modifications thereof, but connate, primitive and necessary properties, as consisting, in all probability, in magnitudes of their parts, must be perpetual and immutable; *i. e.*, cannot be changed by any future reflection, or by any modification whatsoever. This is confirmed by abundance of experiments; all endeavors having been used, after separating a colored ray from those of other kinds, to change it into some other color, by repeated refractions, but to no effect.

Apparent transmutations of colors, indeed, may be effected, viz: where there is an assemblage, or mixture of rays of different colors; the component colors never appearing in their natural hue in such mixtures, but always allayed and tempered with each other; whence results a middling color, which, by refraction, may be separated into component ones, and those, after separation, being remixed, return to their former color.

Hence, the transmutation of colors, by mixing those of different kinds, are not real, but mere appearances and deceptions of the sight; for the rays again being severed, exhibit the same colors as at first. Thus blue and yellow powders, well mixed, appear to the naked eye, green; yet, without having passed any alteration, when viewed through a microscope the blue and yellow particles appear distinct.

Hence, there arises two kinds of colors—the one original and simple, produced by homogeneal light, or rays that have the same degree of refrangibility, and the same magnitude of their parts—such as red, yellow, green, blue, a violet, purple, orange and indigo, with all their intermediate tints and gradations. The other kind of colors is secondary, compounded of the primary ones, or a mixture of rays differently refrangible.

There may also be secondary colors, produced by composition, like the primary ones. Thus, yellow and blue make green; red and yellow, orange—and so on; and, in general, if any two colors be mixed, which, in the series of those generated by the prism are not too far apart from their mixture, results that color which, in the said series, is found in the midway between them; but those situated at two great a distance do not so.

Indeed the more any color is compounded, the less perfect and vivid it is. By too much composition they may be diluted and weakened till they cease. By composition there may be produced colors not unlike any of those of the homogeneal light. The most composition is that of whiteness, for, to produce this, all the primary colors above mentioned are required; and those to be mixed in a certain degree. Hence it is, that white is the ordinary color of light—light being only a confused assemblage of rays of all colors.

If the rays of different colors thus begin to be separated by one refraction of one single surface, that separation is much promoted, so as even to become sensible to the eye by a double refraction.

This is observed in the two surfaces of any glass, provided those surfaces be not parallel; but of all others it is most sensible in the two faces of a triangular prism. The phenomena whereof, as they are the touchstone of all theories of colors, and as they contain the theory of what I have said, it will be proper to enumerate them distinctly.

[TO BE CONTINUED.]

WOOL may be dyed a silver gray color by boiling for half an hour in a bath composed of 4 ounces glauber salts, 4 ounces sulphuric acid; iodine violet according to the shade desired; and a small portion of indigo, carmine. This mixture will be sufficient to dye ten pounds of the wool.

For the Coach-Makers' International Journal.

THREADS FROM THE MEMORY OF AN OLD CUSHION.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER III.

DOWN THE MISSISSIPPI.

> "De river is up, de channel is deep,
> De wind blows steady an' strong."

For three days and nights our great steamer, the Imperial, puffed and plowed her noisy path through the muddy waters of the "Father of Rivers," stopping occasionally to put off or to receive passengers or freight. These stoppages were effected in a most curious manner to me, by a process called "rounding to," for, on account of the swift current of the great stream, it is next to impossible for a boat going down stream to "make a landing," without turning completely around and bringing her head up stream; she then *works* slowly up to the landing. This is the cause of a great deal of lost time, and consequently expense, to first-class boats, and especially when, perhaps, only one or two passengers are to be landed or taken on board—but the boats all do it: not so much for what is made at the time, but for popularity, and thus securing for themselves, in the season, the freight of the parties accommodated.

The first evening of our voyage—the newness of my situation, added to the strange noises all around me—kept me exceedingly nervous, and I did not notice as much of the landscape as I should otherwise have done. It gradually wore off as I got used to it, and especially as my friend, "Tim Dunigan," took a seat on my mate and lay back evidently with the intention to enjoy himself as well as he could—and the "gray" was also settled down, and now quietly munched his hay.

On the right bank of the river the bluffs rose boldly to a great height, presenting a straight wall of rock, along the base of which the river rushed and eddied—its bosom covered with floating trees and drift wood, (for it was a "big rise,") and our boat kept thumping against and smashing the floating stuff, as she forced her way magnificently down to the "*sunny South.*" On our left, the bank was low and flat, and almost level with the river, and even, in some places, the land was overflowed to a long distance back, making the river look like a great lake. I thought it very strange to see the land so *very* low for such a long distance, showing a dark alluvial soil, with scarcely a hill or raise to relieve the monotony of its sameness for hundreds of miles, away down to the mouth of the beautiful Ohio, while on the right bank, the bald, iron-colored bluffs cast their frowning shadows on the bosom of the water for nearly as great a distance. Cairo—at the mouth of the Ohio—what a great natural location for a grand commercial city—but what a place to build a city! A great, flat, swampy plain, or prairie, as far back as the eye can see—the river actually several feet above the level of the land, and only kept out by an immense dyke or levee, from six to ten feet high, and about the same through the base. Standing on the street, inside this levee, the surface of the Ohio was actually on a level with a man's breast. It astonished me a good deal, but "Tim Dunigan" was apparently a great deal more astonished yet, for he broke out in a strain of *native*-isms peculiar to him. He startled *me* from my reverie with a—"Och, murther an' ouns, and this is Kayro; the divil a mutch I'd kayr, oh! to live in there, onless I was a frog; an' spakin' uv frogs, wudn't it be a grate place intirely for the Frinch to settle down; the divil a mutch trouble 'twud be to breed a crop uv hind legs in there. Och, blessed sailor, af that big mud bank broke down, bedad 'twud take a divin' bell to find Kayro. An' they say there's a railroad in there, too; begorra, I'd as lieve look for a railroad undher the bog uv Allen—only that I had an own cousin iv mine who worked on it—aye, an' bedad, was buried in undher it well; he was a wet sowl when he was alive, an' av I'm not mishtakin', ivery *bone* uv his will keep wet in that place till the day uv judgment. Shure I got a letther from him wanst, an' he towld me there wasn't a square fut in that Kayro ind iv the road, that didn't run over the mortial remanes iv some poor onfortunate boy from the *ould dart*. Well, God rest his sowl; in that dirty, black mud lies his bones, an' the bones iv thousands more iv the same stock from that blagaurd, faver an' agy, an' bad whiskey, which they dhrank to save 'um. But that wus the bad savin'; shure they died so fast on that job that it used to take a car load a day of fresh ones to keep the gang up to its full number. Well there, we're aff. Bad luck to sich miskitys as thim; 'pon me sowl that fellow is half an inch long; begorr, af they don't stop bitin' I'll go crazy wid 'em. Divil take the likes iv this for miskitys I iver met. Och, ye murtherin' graveyard, stay there till some day ye're washed clane away—and the sooner the bether, for you need clanin' bad; and barrin' the Fourth Ward in New York, and the Gowanus canal, whin the tide is out, ye are the very dirtiest *hole I iver* smelled."

Out on the broad Mississippi again, and Cairo behind us, the scenery was beginning to change, for the great Chickasaw Bluffs showed on the *left bank*, while the right was low and swampy. The boat "rounded to" again, and *just at dark* we landed at Columbus, Kentucky, situated on a high, steep hill-side. From this point to away below *historical Vicksburg*, the left bank is *generally* bold, while the right assumes the appearance of what the left *was* above the *Ohio*. Nearly opposite this place is the battle ground of Belmont, where General Grant earned such prominent notoriety, and which clearly laid the foundation of his future greatness. Past Hickman, New Madrid, Memphis, Natchez, Vicksburg, &c., to the mouth of the Crimson River, where we disembarked, and the Great Imperial steamed still further "down South" to the Crescent City—the great terminus of this most noble natural highway. Long may it flow onward, untrammeled by political or sectional divisions—free to all, a blessing to all, and bearing on its broad bosom the wealth and productions of a mighty nation through all degrees of latitude, sending joy and plenty throughout the world.

Again on steamer-board, but now a smaller and less pretentious one—a stern-wheeler—which was to land us at Magnolia.

"What the divil that is I dunno," said my friend "Tim." "What the divil do ye call that crawlin' along the bank there? Och, blare and ages, he's gone plump into the wather." "An alligator." "An yallagathor!" an' wud he hurt a body, af ye plaze, sur? Oh, he wud! There—there's another wan, now! Mother of Moses—what a big yalla mouth! Bedad, af he can't bite its not fur want iv a manes fur bitin'—shure ye could run a sthameboat down his throat. Arrah, the ugly bastes is as thick along here as pigs in Connemara."

"An' what's that, sur—there on the threes, hanging down so, all green-like?" "Moss." "Moss, is it!—now don't be jokin' a poor boy. Do you mane to tell me that's the moss they put in cushions? Ye don't tell me so. Well, well—there's nothing like thraveling afther all. Oh, yis, sur; they rots it, and all that green stuff falls off, and laves the inside, which is the prepared moss—oh, I see. Well, thin, I'm obleeged to ye fur tellin' me.

"What's thim big barrels up there on the bank? Ah, yis, sur. Shugar waitin' to be shipped to New Orleans, eh? Well, well; and I suppose they makes a lot iv it down here? Oh, yes; he does, eh? Kurnel Cayton makes a heap, does he? Well, I'm glad iv that. I'll be able to sind a coupel of pound home till the ould mother—rale shugar, and no sand in it—like the spalpeen of a grocer used to mix wid it in Cork."

Ting-a-ling-a-ling went the engineer's bell; the whistle woke the echos all round; negroes big, negroes small, negroes fat, negroes lean, negroes tall and negroes short—male and female, old and young, boys and girls, and old, decrepid, white-haired ones came flocking down to the river bank as fast as they could, and by the time the gang plank was run out the bank was lined with them.

"*Magnolia Landing!*" Come, hurry out that buggy and horse, boys, I heard the mate say to the deck hands—and in five minutes' time we were ashore, and the stern-wheeler was puffing up stream.

Such genuine pleasure as was depicted on the faces of *them* darkies—who were all dressed in their holiday rig—all on the tip-toe of excitement and curiosity to see master and young missus, as they called her.

"How are you, Tom," spoke Col. Cayton to a sleek, well-dressed white man. "This is my overseer, my love; allow me to introduce Mr. Tom Lashard, Mrs. Cayton."

"I am very happy to see you, Madam Cayton. We have been expecting you all day, and the hands have all got a holiday so they could welcome you home."

The niggers were crowding all round our young lady—now the women courtesying, and the men bashfully holding their hats in their hands. The Colonel now turned to the people, and speaking loudly said—"Boys and girls, this is your new mistress, and I hope you will all do your best to make the plantation a happy and pleasant home for her. And now, off to the quarters, and Mr. Lashard will see that you have everything good for a grand old jamberee in honor of your mistress. You, Jim and Ned, stay here and take charge of this horse and buggy. This gentleman, Mr. Dunigan, will tell you what he needs done, and mind you both do just as he says, in everything." And then to my friend, Tim Dunigan, he said: "Tim, you see there are no white servants in this country, and you must make these two boys do all the work you would have to do yourself, and I will find other and more respectable employment for you in assisting the overseer."

The darkies, old and young, set up a shout, with—"De good Lord bress you, masser and young missus. Bress de lady; ef she 'aint the nicest an' hansermest gal I eber looked at. She got mity purty eyes, an' de little wite hans. I reckon massa Cayton muss a had de pick ob a hul lot ob dem purty wite ladies. Oh, golly! she's a beauty!"

The house was a large, handsome frame, with a wide gallery all around it, and a splendid lawn in front, well shaded by glorious old magnolias and live oaks, which made everything look fresh and pleasant, and there was a most splendid view from the piazza, of the river in its many windings. Away for miles could be seen the alternate open ground of the cultivated spaces, and the dark glen of the live oak and magnolia. Truly, it was a delightful situation, and our lady was in raptures with the appearance of everything.

"Oh! Henry," I heard her say to the Colonel, "what a beautiful home. I am so pleased with everything."

"Thank you," said he, "may it always appear so to you. We will do all we can to make you happy, *and if nothing else happens*, I am sure you will love this old home of ours."

Now, I thought it very strange that he should throw a doubt in the way of her happiness. She did not notice it, but I kept hold of the thought for a long time, and could not get rid of it. What did it mean? He was very good and very kind to us, and was as proud of our young lady *as ever I was*. But what could that expression of his—"if nothing else happens"—what could it mean? It took me some time to find out—but it came at last; for, one day, while riding to the town, some twelve miles distant, in company with the overseer, (the Colonel sometimes used us,) he said: "Well, Tom, what's going on round here since I went away; anything new?"

"Well, no, Colonel; but the people are all talking very plain about the government, and the evident encroachments of the North on our institutions, and my opinion is there will be a lively time 'fore long. The people in town don't seem to care a great deal, because there generally 'aint many niggers in the towns; but, Colonel, its the big planters—the influential men—who talk the plainest—the men who have everything sunk in their stock on the plantations—that's what makes things look kind of serious to me. But how did you find the people of the North, Colonel?"

"Oh," said he, "from what I noticed, the Northern people, as a whole, do not want to interfere with the South; but there is a class of men among them who would be reformers, and they will not keep still until they force their extreme ideas on us. Now you know, Tom, that I care very little for parties, politically, and would be only too glad to have this question of slavery fairly settled in any honorable manner, but I cannot afford to beggar myself; for, all I have got is in the place and its workers, and without the niggers it is worth nothing. I dearly love the Union, yet if they interfere any farther, and our statesmen see fit to separate and secede, much as it will be against my judgment and feelings, still I will support the movement, and give the weight of whatever influence or talents I possess, on the side of my native State."

And here I had the solution of the problem which had worried me, and, although relieved as far as regarded my "young lady," I was most terribly shocked at what I heard; for, although a "cushion," I had my feelings, and I, too, had a *native State*, and every hair in me bristled with astonishment at the thought of what I heard. What! separate the great *Union* I had always so fondly supposed indivisible! What! sectionalize this great country, thought I! Never! never! never!

But, Mr. Pumice, excuse me; I am getting excited over this part of my history. I must stop, for I must not let you write a political treatise on the issues of the "*Great Rebellion*," but must confine myself to my personal affairs, and tell you about the "Magnolia Plantation." It was mostly sugar that was raised here, and "young madam" used to take a great deal of pleasure in driving out to the fields where the negroes worked, to watch them in the process of cultivating it, by hoeing and plowing and cutting the cane, and then to see it ground and pressed and boiled and made ready for shipping to New Orleans. But, before it was ready for shipping, events thickened around us so fast that we never saw *that crop shipped*. In short, the demon of war was abroad, and already the premonitory symptoms of armed conflict could be seen and heard.

[TO BE CONTINUED.]

SLANDER AND DETRACTION.—The true Christian never indulges in evil speaking. It is mean and cowardly, and the sure indication of a low and vulgar mind. A woman given to this vice is generally little less than a monster.

☞ The Singer Sewing Machine for the trimming room.—Read advertisement.

For the Coach-Makers' International Journal.

CHRONICLES.

BY GENIUS, THE SCRIBE.

CHAPTER I.—EZRA AND ISAAC.

And it came to pass, in the days when Abraham ruled the land of Unkle Psalm, that there was a man in Gotham, and his name was Ezra, which means, help or I sink.

And the same was he who, in former times, did send Epistles to a man, who was in Columbus, which is in Oo., toward the setting sun, beyond the *Alleghanies*.

And Ezra did covet his neighbor's goods, even his ox, his ass, and his *subscription list*, and did write to a friend, and did say, "sieze it, *Towser*," and he did obey.

And Ezra was a dealer in *minerals*, which were *black*, like unto ebony, and the people did buy from him, and he prospered and grew rich.

And after a time, he made himself a prophet, and he proclaimed it to all those that were skilled in the art of chariot making, that he was their prophet, and would deliver them from darkness, and they believed him not, *for they were wise*.

But, some there were that *did* believe the things that he did say, for his tongue was smooth, like that of the serpent in the garden of Eden; and, he did take from them, their *cents* and *sense*.

But, lo and behold, in course of time, there came another prophet from the City of Brotherly Love, which is to the south of Bethlehem, and nigh unto Spain, which is Jersey.

And the name of this new prophet was Isaac; and he was scribe for all chariot makers of the land of Unkle Psalm.

It came to pass that about this time, Abraham, the ruler of the land of Unkle Psalm, died, and he was succeeded by Andrew, son of John, who ruled for more than three years.

And Isaac did act as scribe to the charioteers for a good twelve moons, and he did do well, and the people said it was good.

And at this time the great men among them did assemble in council at the City of *two Cins*, which is Porkopolis.

And a few of them did whisper among themselves, saying: "our Scribe is false, come let us kill him." But, they did not speak out for fear that the others would not agree with them. But, when they had got to their homes, the serpent, whose *tail* Ezra had hold of, began to show its *head*.

And his stewardship *was* explained to the men, whom the charioteers had appointed, and they approved of all that he had done.

But Ezra by this time had waxed wroth, and he, too, did say vile things against Isaac, *which he could not prove*.

And Isaac did, unlike Ezra, buy their book from the charioteers, and it was made larger, yea, even larger than that of Ezra, and again he waxed wroth.

And his anger was so great upon him that he did address the people in an unknown tongue, even such words as *idiosincricities*, *agrarian*. *pronunciamento*, *cidevant* and many others.

And Isaac did take unto him twelve wise men, who were as follows: D. Board, P. Allette, T. Acks, V. Ulcan and Spoke Shave, who were men well skilled in the art of chariot making.

And there was Gerald, and Dabbs the younger who were minstrels.

And Junius and Mummy and Genius, who were Scribes.

And Jay H. Tee, who was a floral Scribe.

And Fred Pumice, who was from Humphport, and was skilled in the art of *telling stories* like unto Ezra.

Now, therefore, all these twelve did teach the people wisdom, and they did rejoice thereat.

But, Ezra had but *three* wise men, (and *they* were not wise,) to assist him, but they will not stay long, for *Pique* and pride goeth before a fall, and another will *Leg-it* afterwards.

But, Ezra being used to go into the bowels of the earth to look for slabs of coal, on which to trace *Persian Chariots*, he became blind.

Therefore, in No. 3 of the JOURNAL, when the text was "*purity of motives*," Ezra through his *failing eyesight* could not see it, and therefore could not respond, for even until now has he let it pass.

But, has he not a greater disease? yea, threefold greater, and that is, *Egyptian on the brain*.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

SPRING BEARINGS.

RAVENNA, OHIO, December 21, 1868.

MR. EDITOR:—We, as mechanics, have arrived at some points in our practice by hard knocks, and not by scientific progress; or we have taken what we have from some one else, without asking any questions about it. Whether it is according to common sense, or the principles of strength or elasticity of the article we are using, I think this is especially so in relation to spring bearings. We give our elliptic springs 6 inches, and some give seven inches bearing. I think this is outrageous. What are the springs for? Just two things. First, to bear the load; and second, to carry it with easy elastic motions. So we first make it weak where it ought to be strong, so as to bear the load; and second, we kill its elasticity by binding it fast to the axle-tree and spring-bar.

Where is the elliptic the strongest? I say in the centre. Where is its seat of elasticity? In the same place. So we weaken the strong part by making big holes in it; and then, to mend that blunder, we give it a great long bearing, and kill its elasticity by binding it fast.

Now, this is science and philosophy, with a vengeance; but such is the stupidness of common mechanics We don't know anything. Why should we? Our fathers done thus and so, and so ought we. No, sir, we ought not to do so because our fathers did so. We ought to know better. When we hang a carriage, we ought to give the spring all its native strength and elasticity; and in order to begin this reform, we must begin with the spring-maker. When he makes the spring, in place of making three large holes in the centre, (sometimes half an inch,) he must not make but one, and that a very small one, say three-sixteenths of an inch, and then not put a belt into it, but a rivet, and rivet it up when the rivit is hot. A rivet that size, and put in in this way, will hold a two-inch seven-plate spring together until the day of judgment, so that it can be handled and transported anywhere.

When we come to use the spring, in place of giving it six or seven inches bearing, we need not give it but two inches. That will be one inch on each side of the hole, the same as we do now, and surely just as secure. Now, by this arrangement, we have gained five inches in length. The longer the spring the more elastic. We have gained more in strength, because we are nearer the centre—the source of strength. Some may be afraid that the spring will not retain its place with so short a bearing. I see no reason why it should not. If it is well clipted on, what should throw it off? In two-spring carriages, there will be no difficulty. Let the experiment be tried.

And further, I would put two pivot holes through the first plate of the springs, (top and bottom, one inch each way from the centre,) three-sixteenths of an inch; then insert in the axle-bed and spring-bar two pivots to fit into those pivot holes, not allowing the spring to touch the bed nor bar; then secure them with clips. Then we have all the strength and elasticity of the spring for carriages of four springs. All we have to do is to use three-quarter springs for the back, with the front end secured to the body, and for front use turned springs. With this mode of hanging, we shall have lightness of appearance, and ease to the load.

EAST AND WEST.

For the Coach-Makers' International Journal.

HOW TO MAKE MONEY.

MR. EDITOR.—I send you the following receipt for making money, and hope you will give your readers the benefit of it. I can vouch for its originality. Yours, &c., MUMMY.

TO MAKE MONEY.—Start a Coach-Maker's Magazine by stealing another man's subscription list. Then, by low flung caricatures, seek to bring into bad repute the private character of the injured party. Put these two ingredients into a "little teapot." Call on any respectable druggist, and come away again. Now take 3 parts *avarice*, 2 of *envy* and 5 of *fear*, and pour over them a quart of the *water of discord*. Stir this mixture gradually into the "little teapot," and place it over a brisk fire of *jealousy*, until it comes to a "big tempest," boil, remove the "little teapot," empty the contents into a strainer of public opinion, and you will have a *conglomerate of tea pot-ass-ium*. A small quantity of *Philadelphia quicksilver* will separate the pure metal from the dross, and you will be a *happy man*.(?)

Pencil, Rule & Square.

D. BOARD, EDITOR.

FRENCH OR SQUARE RULE.

PART THIRD.

BY A PRACTICAL CARRIAGE ARCHITECT.

In our last diagram, we left the patterns marked for the thickness of stuff. Taken for granted, the stuff, including the panels, roof-boards, bottom-lining and mouldings, are ready for dressing, commence with the panels, and when dressed they should be placed overhead on racks for this purpose, in a warm place with sticks between. It being very important that they should be dry to prevent checking when used, if you wish to build a good body. Next dress your cross-rails; when done, we will strike the shoulders commencing with the back bottom bar; lay it on the draft, as represented in the diagram, at space F; E, being the bottom of the draft-board, or the centre of the body. D the face of the bottom side on the cant. You will now mark your shoulder from line D, allowing 1¼ inches for the tenon, and also the centre line from E on the bar. Now reverse your bar, keeping your centre line at the bottom of the draft board, on line E, and mark the other shoulder in the same manner on line D.

Proceed in this same manner with the seat-rails; with your dividers place one point on line C, the top of the seat rail, the other to inside of the standing pillar on line L, this space to be added to each end from the marks already taken. Bevel for the shoulders, from the top of the seat-rail, inside of the pillar, on line L. Having this bevel, strike your shoulders. In this same manner you mark your front toe-board rail, and all other cross-rails, M being the face of the bracket on the cant.

You perceive in this manner that you can get the length of all your rails without the use of a rule, the draft being your guide. Next dress your bottom side, which, when ready, place one bottom side on the draft, as shown by the white space in the diagram, ready to transfer the perpendicular lines on it; this to be done by commencing with the perpendicular line No. 1 at the foot of the front pillar, then marking it both top and bottom; also with Nos. 2 and 3, and so on the full length. You can at the same time make your cuts for the width of your standing pillars; square these marks across top and bottom; transfer these lines to the other bottom side in the same manner. We will give the manner of pricking off in our next.

Fig. 1 represents the manner of letting in of hinges for hanging doors. No. 2 a piece of panel stuff swept inside to the standing pillar, the outside in width sufficient to allow the pins of the hinges to clear the mouldings of the doors, dressed perpendicular: by placing this pattern to the pillar you can square across for your hinges, both standing and door pillar. We consider this a good idea for hanging calash doors, as they require to be exact to prevent the upper part drawing, when opening.

LYNN, MASS., Jan. 11th, 1869.

MR. EDITOR:—Will you please answer the following question through the columns of your JOURNAL? Having shown your JOURNAL to several of my fellow workmen, they all raise the same objection, that it does not pertain to anything except coach work. My question is this: Do you intend giving any drawings of buggies, carryalls or sleighs by the French Rule? I suppose you are well aware that coach building is carried on to a very small extent in Massachusetts compared with light work. It seems to me it would be the means of getting many more subscribers for your JOURNAL.

Yours, with respect, STAR.

We take pleasure in answering the above question, feeling assured that the motive which prompts the writer is a desire to see the JOURNAL made as perfect as possible, meeting the wants of the entire trade. The French Rule, as given in the JOURNAL, has been pronounced by many competent judges, to be the most complete, simple, practical and easily understood of any former explanation of it heretofore published in this country.

The writer of the above has fallen in the too common error of thinking that the French Rule has to be learned for each kind of body that is made. Our object is to teach the system of drafting, and the application of the French Rule. We have, therefore, selected a body that cannot well be made without its application. We commence at the foundation, and take a certain kind of a job through, giving the learner the points required unto the end. A buggy body can be made, and is, in nine cases out of ten, by persons entirely ignorant of the rule, but a person being acquainted with the rule can work to a greater advantage on light work. A person learning the rule, as applied to buggies only, would know but little of the system of drafting, while if the learner followed us through, and became practically acquainted with our explanations, would be prepared for any job either light or heavy, except, perhaps, some of the more difficult heavy jobs that require more lines than the one we are explaining, and which we shall take occasion to notice when we have fully demonstrated this.

We shall also apply it to light one-seat jobs, but taking for granted that all have interested themselves in our explanations in applying it to this coach, will not go into any lengthy explanation of the rule, only to apply it to the different jobs to refresh the memory of the learner.

Having been requested by many subscribers to republish the French Rule, which was given in Vol. III., we complied, and also enlarged the drawings to the ¾ scale. When we shall have completed it in its present form, we will then give it a more extended application.

Desiring to profit by the suggestions of our patrons, we shall aim to guard every weak point, and make this department of the JOURNAL first-class in every particular.

LEWISBURG, PA., January 3d, 1869.

MR. EDITOR:—I would like to ask you a few questions about the Kimball Buggy body; in the explanation, it says, that it takes but one panel and no joint in it, and according to the scale ¾ of an inch, it takes far larger boards than I have, and I would like if you would tell me how wide a board it takes according to that plate, No. 16, and how much the body is beveled to the foot behind? A body can be made with a board 13 inches wide without joint; the sides and back would be square up, the corners, though, round. W. C.

The Kimball Buggy is beveled on the back 7½ inches, and would require a board 32 inches wide; of course the less bevel, the narrower the board required.

Every establishment has not, in fact, but few have, the conveniences for bending these panels, and as yet, there are none in the market for sale; but there are parties that now have in contemplation the manufacture of them, and in a very short time, we doubt not, but they will be on sale with the principal dealers in carriage materials, and advertised in the JOURNAL.

By letting the panel come only to the duster, several inches in width of board can be saved, and the front bracket can be paneled without detriment to the job; the duster covering the joint.

This manner of constructing is entirely new, and the bending of these panels will be attended with considerable expense and outlay of machinery; but if the round corners are to be continued in style, it will amply repay those who have bending machinery, to turn their attention to the manufacture of them.

The letters of inquiry we are receiving, are evidence of a general desire for some plan whereby the corners can be made, that will obviate any possibility of their giving way. The plan suggested is practicable, and will doubtless soon come in general use.

Wheel-Horse and Mallet.

SPOKE SHAVE, EDITOR.

In my former communications, I referred to a few of the responsibilities of the wheel, the necessity of its having life or spring; also, the importance of the wheelers having a knowledge of the different temperaments or qualities of his material. In the present, I shall, to the best of my ability, try and explain, as intelligibly as possible, how to work these different temperaments so as to harmonize, thereby rendering the wheel serviceable.

In the selection of our hubs, it is necessary that we get them as near one quality as is possible; our spokes we will have to take them as they run in the bundles or sets. Hub, 3½ by 6½; spoke, 1 inch; felloe, 1 inch; tread, ⅞ or ¾ as preferred; 14 mortices back and front; size of mortice, 5-16th or ⅜ scant; depth, to suit the spoke. Height of wheel: back, 4 feet 2 inches; front, 3 feet 11 inches.

In dressing down our tenons to suit the mortice of the above quality of hubs, we should fit them to side of mortice, with draw enough, so you can force the tenon down in the mortice without any extra exertion—the draw on the back of spoke, about ⅛ of an inch. Having dressed the tenon to our mortice, we then dress, or shave, our spokes. The spoke for this size wheel should be 1 inch, as above. The body you will find to be about ¾ of an inch; such being the case, you will dress out your spoke, if you wish to give it spring, to ½ an inch, or, in other words, ¼ of the spoke, this spring should be as near the hub as possible. The face of your spoke should be the same as the body, ¾; the back, at the shoulder, ⅝. Shave your front leaf—bringing it together about 2½ inches from the shoulder. The back leaf, you will observe is not as wide as the front, but you do not give it the same taper; you leave the leaf about ½ an inch, 3½ inches from the shoulder. This gives you a very pretty shaped spoke. It throws the heft of the spoke on the back, thus giving you a spoke of light appearance from the front. After you have your spokes dressed, you will strike off the side edge, at the shoulder, with your file; it must be lightly struck off. The reason for so doing will appear when we go to preparing for the driving.

The next thing to be done, is to deduct the size of the box from the size of the hub. This will give us the length of the tenon for the hub. We then saw them off, and strike off the edges with the file. By so doing, your tenon on the spoke will not force the draw on the side of the mortise when driving before it. If we have a hard hub, as above, and a hard spoke, we will mark off the mortise the size of the tenon at the point, and give our mortise the same draw as our spoke. If our spoke be of a coarse grain, and porous, we will be careful to give it draw enough to compress the pores, so that the spoke will not have a chance to work in the hub; but we must be careful not to give it too much draw, so as to mash—thereby rendering it useless. If we have a soft spoke, we will give our mortise more draw than we do our spoke, with the view of binding it on the bottom of the mortise, and not mashing it at the shoulder. You will continue to discriminate as to the temper of your spokes, upon the same principle, until you have them all fitted separately to your mortise. You will let your spokes down into your hub about one-sixteenth of an inch. This must be let down square, and of the shape or size of the shoulder.

Here you will discover is the necessity for striking off the side of the spoke at the shoulder; that is to say, you will strike off the depth you let into the hub. This is done to secure your shoulder from checking off. You perceive that in doing this, you get the spoke in the hub fair on the face. You are not compelled to putty up this settling of the spoke, and it will also prevent that eye-sore, after the wheel has run awhile, from presenting the appearance of the spoke being loose in the hub. This putty, or paint, will crack around the shoulder of your spoke.

When you are ready to drive, you will deduc the depth of your rim from the height of your wheel, and set your set-screw in its proper place, which is, if your rim is 1 inch, the same below the height. You will also set your set-screw $\frac{1}{8}$ of an inch back of the face of your front mortise; this will bring the face of the rim on a line with your front spoke, which will give your wheel about $\frac{1}{4}$ of an inch disk when it is properly hooped.

When this is done, you will band your hub with slip bands, which will be large enough to receive a strip of leather under the band, so as to prevent the same from bruising your hub. In driving your spokes, you will have your glue as strong as you can work it, and be careful to have the space you have let into the hub for the shoulder of the spoke, well furnished with glue. This will greatly assist in holding the shoulder permanently in its place. You will also be careful to cut around your spoke that is in your hub, with a very thin chisel to prevent the shoulder from drawing the face of the hub down before it. Before you drive your spokes, you steam your hub well so as to soften it. By so doing, you will save much labor in driving; it will also ease the hub, and prevent its checking. You will also find that after this steaming has *dried* out, that the spoke is cemented as it were to your mortise. Having got our spokes in the hub, we will, in our next issue, proceed with the wheel to completion.

WILMINGTON, Del., Dec. 31, 1868.

MR. EDITOR—*Dear Sir*:—I hope I will not annoy you, but I want to ask a favor of you. I wish to get a spoke tenoning machine—one that will cut the flat tenon which goes into the hub—if there are any machines in existence for that purpose. If you will find out if there is a machine of that kind, and also the price of it, and let me know, I would be obliged to you, and pay you for your trouble. L. H.

The machine you desire can be had; the cost will be about $15 or $20. I have one that will cut your tenon for the hub; it is the only hand machine that I have ever seen. It can be arranged with two planes—one for the tenon and one with a round face—so arranged as to cut your shoulder, and, at the same time, dress your spoke out to the thickness you desire. The advantage of this plane is of great benefit, as it leaves you, in shaving your spokes, but little work in comparison with what you would otherwise have. It also gives you your shoulders all of one size, and adds neatness to the general appearance of your wheel. I cannot direct you where to get one ready-made—I have never seen one for sale. I have had several made without the round face. I have also a machine for dressing the face and back of the spoke. It gives the spoke the draw you wish, or bevel; and it gives you all your spokes of the same exact size and draw, which is an advantage of at least $1.50 in making a set of wheels; besides, it relieves the mind, for the time, of that close attention to your business. If you desire, I will see what one can be made for, with the two or one plane, and superintend the getting up of the same, and forward as directed.

MR. EDITOR:—I am a graduate from a log school house in Western New York, and a member of the wheel fraternity. I will contribute a few words to Spoke Shave and Mallet, but will endeavor to be brief as possible. I fully agree with the January number on the selection of timber, and will give my views as to putting together of a wheel. I back off my spokes with very little taper or slant. I don't wan't them very tight at the shoulder, but pretty tight at the bottom. I give them a little squeeze flatways. My spokes are now ready to drive. I lay them on a little rack for the purpose, with the ends close to a hot stove, and heat hot, so as to shrink them as small as possible. I now take my hubs, and pare off the corner of the mortice on the sides. I have two temporary bands nicely smoothed out on the inside that I drive on each side of the mortice. I then dip my hub in boiling water, and let it remain about five minutes, which softens it a little, and it is not so liable to check, and the spokes drive much easier, and are less liable to get loose. I always use a little glue in the mortice.

Since practicing the above, I never have had any trouble with spokes working and getting loose. My experience has not been as long as some, but I have aimed to search out the right way and follow it. If any one has a better way let me hear it, and I will own up.

GRADUATE.

☞ The Singer Sewing Machine for the trimming room.—Read advertisement.

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

THE COMPETENT BLACKSMITH.

We shall endeavor to give as complete a description of the different requisite items of the blacksmith trade, with an insight of such wood work, as wheels, carriage parts, &c., as should be necessary for the blacksmith to understand, without dwelling too widely on the common implements.

We would, however, ask forbearance for anything that should not meet with the approval of the reader, and should gladly accept suggestions, leaving a wide margin, especially for questions and answers.

THEORY OF CONSTRUCTION.

(See illustrations in front of Journal.)

With respect to the great variety of carriages and wagons, we have to consider the fashion, the peculiar taste of the customer, and the market. To meet these demands fairly we have to contemplate the motion, the long and short turning, and pleasing appearance. The theory of motion and turning confines itself to wheels and axles, which, being of the same shape and purpose, will only differ with the design of the body.

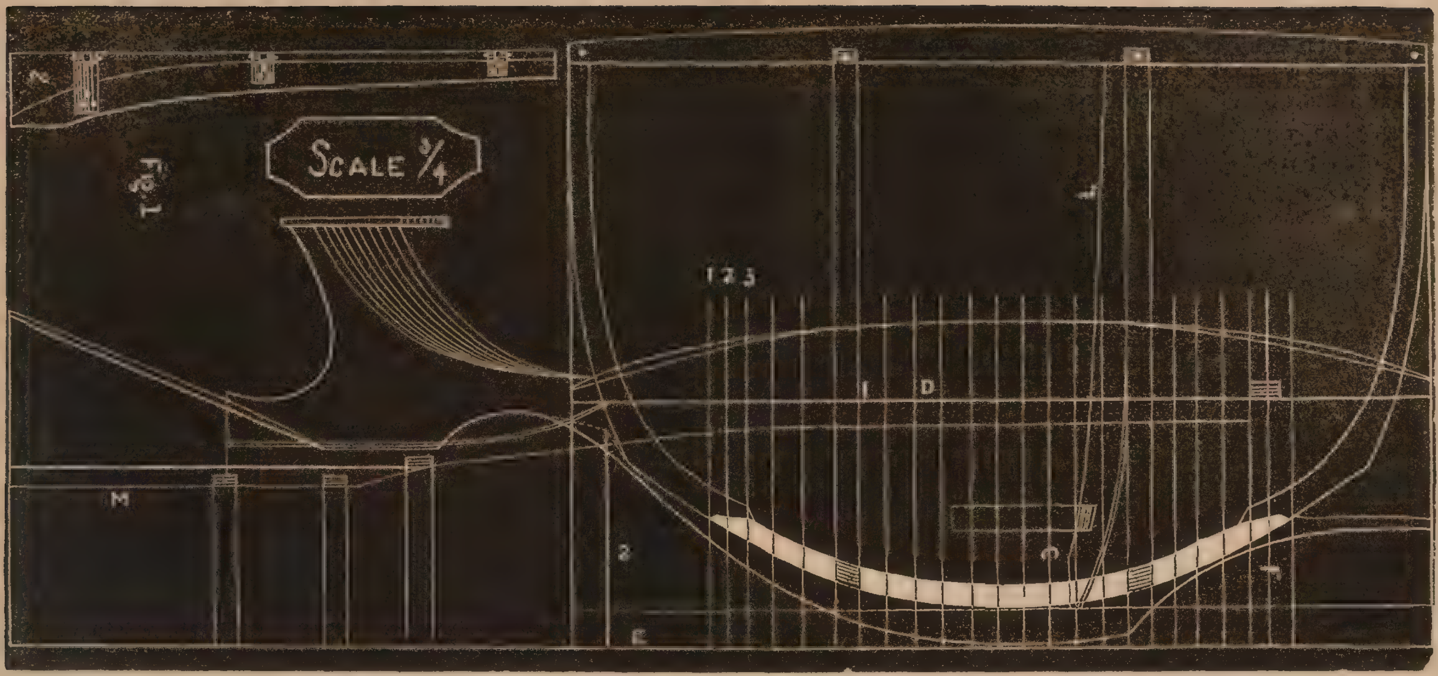
RESISTANCE OF MOTION.

The power of motion rests mainly in overcoming the friction originated through the steady touch between the tire and the ground, and through the friction of the axle arm and box.

The condition of the road requires a different fashioned tire to facilitate motion, and on sandy bottom a perfect flat tire; for country roads, of a loamy bottom, use the shape fig. 1 and 2, because they lift themselves easier out of the soft bottom, and keep the tire clean by dropping the gathering mud, which retards motion more than is generally thought of. For a plastered road, adopt tire figure 3, of a medium width, as you will have found your tires look after a short usage. The friction of the axle and box acts not only on the surface of the arm, but it increases by the gliding between the shoulders of the arm, especially on a hard and even road, considerable. In order to show how to lessen this resistance we will give a rule for the bend or set of the axle arm and dish of the wheel. A light motion depends further on the height of the wheel, the position of the line of draught, and the lessening of the weight of the vehicle.

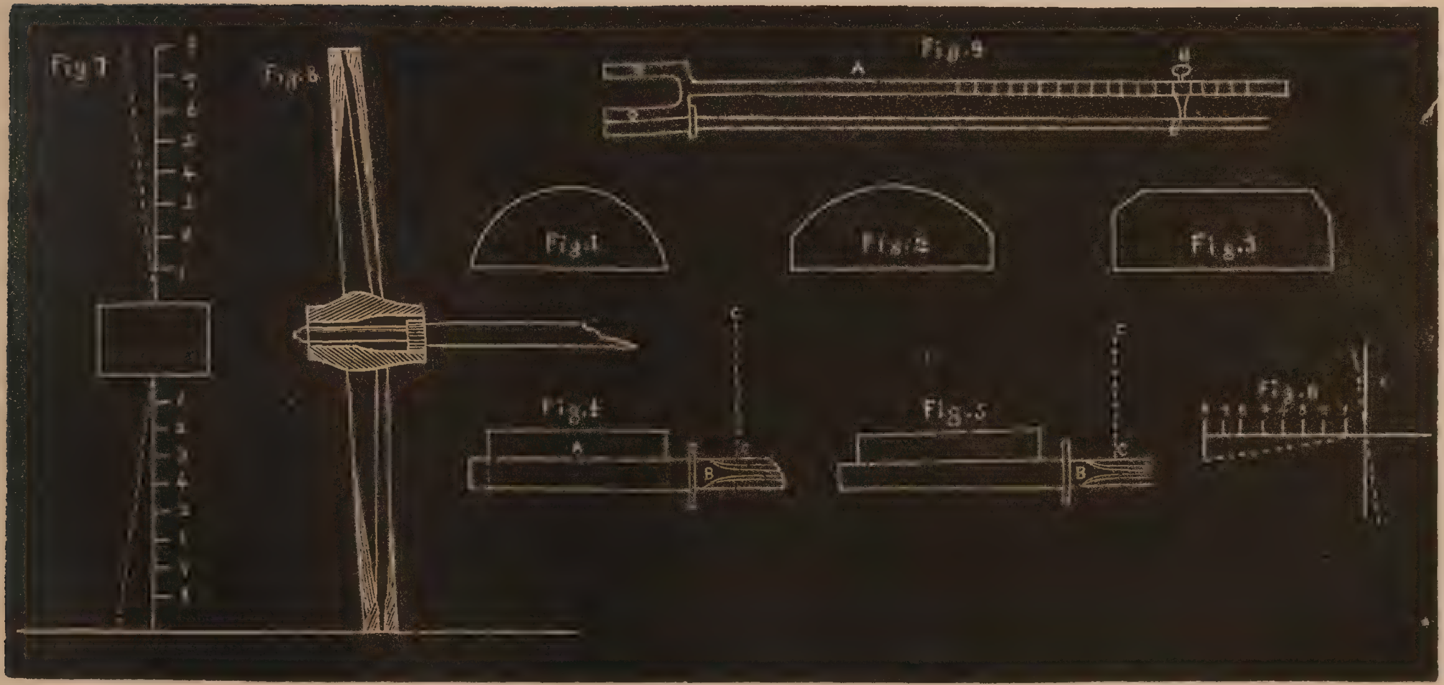
SHAPE AND POSITION OF AXLE AND WHEEL.

The cylindrical shape of an axle arm is the right one, as it causes the line of draught to act in a straight line on the whole length of the axle; it only needs a glance at the top view of figure 4 to find that the box A begins to turn equal in its whole extent when propelled by line C C, or line



Coach Drafting: The French or Square Rule.

Three-quarter inch scale. Explanation on page 69.



Theory of Construction.

See V. Ulcan's Department, page 74.

of draught. But let us compare the conical arm, figure 5, and we find that the box inclines to leave the shoulder B, and would actually drop off if not kept back by the nut or pin. Another disadvantage consists in the play between the shoulder and box, which will not be avoided by turning the arm one-eighth of an inch forward. The arm should only taper a very little, as the wheel, forced into a standing position, would wear off, and will then rest on the arm on the back and front edge, the load pressing in a perpendicular line.

POSITION OF THE SHOULDER OF THE AXLE ARM.

The idea of keeping a wheel in its exact position requires the shoulder to rest square on the arm, as shown by the dotted lines, figure 6, and will then always come back to its proper place. The set of the arm is confined to the following rule: Divide the length of the arm into eight equal parts, and bend it the eighth part of the length, as shown in figure 6; this, combined with a rule for the dish of spokes, shown below, is the best way for effecting easy motion. For an axle arm playing in the box tolerably free, use a high shoulder; the bought axles have, in relation to their proper fitting, a narrow shoulder, kept tightly in the groove of the box, coated with either a washer or oak-wood disk.

POSITION OF THE SPOKE.

The lowest or undermost spoke, as the immediate supporter of the load, has to stand plumb on the base, and, in consequence of it, are the spokes driven dishing, figure 8. To do this properly we divide the length of the spoke from the outside of the hub into eight equal parts; one of these parts gives the required dish, figure 7. By applying to figure 8 we find the top spoke leaning double the dish over the bearing or lowest spoke, and have the wheel now in position.

SETTING OF THE AXLE.

To finally set an axle we have to use the axle-setter, as shown in figure 9. It is made out of ⅝-inch iron, shaped like a fork, and has got one prong corresponding with the set of the arm, and the other straight. After you have ascertained how wide your track should be, (by measuring from the inside of the felloe at the bottom to the outside of the opposite one, fetching the width of the track right in the middle of the felloe,) you place your setter with one shoulder to the inside of the shoulder of the arm, and screw up slide B to the opposite shoulder, then mark the point where your slide touches the inch measure of the setter. Draw a plumb line from the inside of the shoulder to the middle of the supporting spoke, add this to the length between the shoulders, which have been held together before welding, and mark a chalk line across, and set your pattern or setter accurately. Now weld together, and if your setter rests on your axle in the manner shown in figure 8, your axle answers to all requisitions of a well-set axle.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

The Principles of Coloring in Painting.

PERSPECTIVE.

In painting, we have two kinds of perspective, the *linear* and the *ærial*.

The first is the art of producing upon a plain surface the lineaments and contours of objects, and their various parts in the relations to position and size, in which the eye perceives them.

The second is the art of distributing in a painted imitation, light and shade, as the eye of the painter perceives them in objects placed in different planes, and in each particular object which he wishes to imitate upon a surface.

When we regard attentively two colored objects at the same time, neither of them appears of the color peculiar to it; that is to say, such as it would appear if viewed separately, but of a tint resulting from its peculiar color, and the complimentary of the color of the other object.

On the other hand, if the colors of the objects are not of the same tone, the lightest tone will be weakened, and the deepest tone deepened.

In fact, by juxtaposition, they will appear different from what they really are.

The first conclusion to be deduced from this, is that the painter will rapidly appreciate in his model the color peculiar to each part, and the modifications of tone and of color, which they may receive from contiguous colors. He will then be much better prepared to imitate what he sees than if he was ignorant of this law.

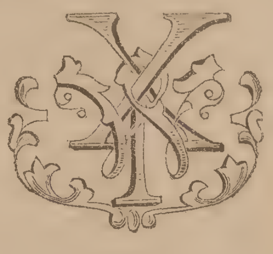
The eye, after observing one color for a certain time, having acquired a tendency to see its complimentary, and as this tendency is of some duration, it follows, not only that the eye of the painter, thus modified, cannot see correctly the color which he had for some time looked at, but, also, another, which might strike them while this modification lasts. So that, conformably to what we know of mixed contrasts, the eye will see not the color which strikes him in the second place, but the result of this color, and of the complimentary of that first seen.

Suppose a painter has to imitate a white stuff, with two contiguous borders, one red, the other blue; he perceives that each of them is changed, by virtue of their reciprocal contrast; thus, the red becomes more and more orange, in proportion as it approaches the blue, as the blue becomes more and more green as it approaches the red. The painter, knowing by the law of contrast the effect of blue upon red, and reciprocally the red upon blue, will always reflect, that the green hues of the blue, and the orange hues of the red, result from contrast; consequently, in painting the borders simply red and blue, reduced in some parts by white or by shade, the effect he wishes to imitate, will be reproduced.

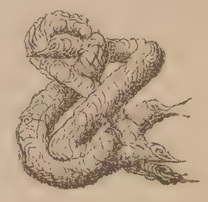
[TO BE CONTINUED.]

MONOGRAMS.

The patterns, W X Y, are simple in form and easily drawn. The letter X was drawn first. The letter W was then represented by simply drawing an ordinary W, and on the straight lines forming the curves as represented. The letter Y is formed by using the upper half of the letter X, beneath which the stem of the letter Y is placed. Lay in the letters with burnt sienna and white, high light with white or straw color, and separate the letters with a wash of asphaltum and carmine. Paint the outside border with light blue of different tones, the deepest shades with purple, mixed of ultramarine blue and carmine, or scarlet lake. high light with white. Z & may be laid in with gold, and shaded with asphaltum, so as to represent the pattern as given. The ornament we will leave to the taste of the painter.



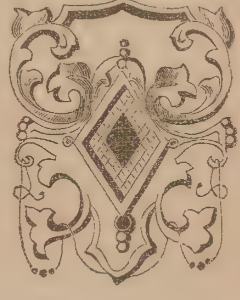
W X Y.



Z &

The design may be reversed, giving the appearance of a different pattern. By dividing it crosswise it forms a small ornament, using the upper half reversed. The scroll work divided, will suit for corner pieces, &c.

A pleasing effect is always produced where the colors selected for the ornament, harmonize with the color of the panels. The colors used for striping the body and gearing should also be used to some extent in the ornament. We shall hereafter give some more complicated designs of monograms, and endeavor to present to the painter some ornaments and scroll patterns, which we trust will be pleasing.



MERCER CO., PA., Dec. 17th, 1868.

I would inquire about striping material, whether you know of a striping fluid which resembles gold leaf when applied to carriage work? And where can I get it?

ANSWER.—There is a gold paint used for striping called *liquid gold*, manufactured by Winsor & Newton, 38 Rathbone place, London; and we suppose can be had of any respectable dealer in painters' material. Reference to our *Business Directory* will give you the names of some first-class dealers in that line, any of whom can supply your wants. An order sent to this office will meet with prompt attention.

NEWVILLE, PA., Dec. 14th, 1868.

MR. EDITOR.—I would inquire what colors are used to produce the richest *claret color*, and the proportions of each? And what produces the finest *olive*, and proportions of each?

A SUBSCRIBER.

QUESTION 1ST.—The richest *claret color* is obtained by simply purchasing the best English lake, and applying it clear, without any other color mixed with it.

QUESTION 2D.—Use Brandon yellow and drop black, which will make a very nice shade of olive green; or, take umber, yellow and black, the yellow and umber to be mixed up, and the black added in a greater or less quantity, according to shade desired.

There are several shades of *claret*, also of *olive greens*—some painter's speak of *claret*, and represent the *claret wine*, as seen in the high lights, which would be the richest tint. Rose pink, imperial lake and English lake, with a slight purple tint, would therefore be used to represent *claret*; again, *claret wine* in shadow is of a purple tint. To represent this, it would be necessary to add blue to English lake; and, also, a small quantity of black.

TIPTON, IOWA, Dec. 7th, 1868.

MR. EDITOR.—*Dear Sir:*—Having by accident came across a copy of the September number of your "Coach-Makers' International Journal," I found it to be just what I want, and, in *my opinion*, far ahead of the New York Magazine. Enclosed you will find $3, for which you will please send me your JOURNAL for one year, commencing with the new volume, (Vol. 4,) and also send the steel plate engraving.

Will you please answer the following questions: Where can the striping pens be got, and what is the price? Are they of any account? Will they stripe both broad and narrow, or which?

Yours, &c., J. S.

QUESTION 1ST.—The striping pens can be had by sending your order to this office. The price is one dollar and twenty-five cents, ($1.25.)

QUESTION 2D.—They are of real value to the painter. For broad line striping they are worthless, and are only designed for fine lining. For this purpose, they require some practice, in order to obtain full control of them, in the various kinds of work to which they may be applied.

The advantages over the ordinary fine line pencils, are, *the pen* produces any number of stripes of the same size that the pen is set.

For delicate scrolling, cane work, plaid work, &c., it is invaluable.

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

BROTHERS OF THE SHEARS, NEEDLE AND TACK-HAMMER:—During the long period we have been engaged in editing this Department of the JOURNAL, very little assistance has been offered to us from outside sources; or, in other words, the trimmers have been generally very "*backward in coming forward*" to do their duty by offering new or original ideas that may benefit the craft, when spread abroad through the columns of this great (and now popular) organ of our trade. Whether it is a bashful under-valuation of their views which prevents them from advancing the interests of their craft, or whether it is a selfish by-gone system of holding on to what they know, for fear others would be as wise as they, which deters them, *as a class*, from working for the good of all, I cannot tell; but certain is it, that they do not warm up to a spirit of making improvements to the same degree as some of the other branches. It is not because trimmers do not read the JOURNAL, as a class—*certainly not*; because, on that head I have a little good reason to be proud of the fact that the JOURNAL counts among its readers as great a number of trimmers as there are of any other branch. This is very flattering, as proving the interest taken by my brothers in our JOURNAL. But they are not doing all they could by simply reading and paying for what they read; they must do more—they must lend their ideas for the benefit of all; I say lend your ideas, because, if you do give us the benefit of your experience or talents, some others will be encouraged to *come and do so likewise*, and you will thus be repaid, and perhaps ten-fold, in receiving hints or suggestions from the experience or brains of a thousand others in the same line of business as you are.

But I hear some old veteran, full up to the brim of all that he thinks necessary to be a good workman, exclaim, oh, bosh! I know all I want to know, and I ain't going to teach every Tom, Dick and Harry, what it has cost me years to learn. I know all I want to know, and let others find out as I did. Now I hold such a man as this to be a relic of ancient times, as a species of animated Egyptian catacomb; the man himself only the stone which marks where something is hidden, but what? he says 'tis none of your business, he is perfect, *you can go to grass.* What a false system in this day of general open diffusion of knowledge. What egotism in any man to think or say he cannot learn anything from others, and yet there are plenty such; yes, plenty; but I ask readers of this JOURNAL, or the readers of any kind, what do you think of this kind of man? What I think is simply that it is no such a thing, and he ought to have a little trimming shop set up for him in some sweet little isle of his own, where no one could hear of, or ever see him again; the world would never miss him, and we could all get on just as well without him, and be none the worse off.

Now, brothers, I insist that there does not live one man who is so perfect that he cannot learn anything from others; no, indeed, we are all (to a certain extent,) dependent on each other, and none of us but can learn something from the ideas of others. Then, let me again call on you, who may have anything that would benefit your fellow-man, be it ever so slight, to send us your views, and we will either suppress your name, (if you wish it,) or will give you credit (by publishing your name in full,) for your idea; do not be afraid to send what you may desire because you think them crude, or because you may not be able to write an elaborate description of your idea; give the idea, and we will gladly dress it up and make it presentable.

I am led to express the above sentiments through having received a communication from T. F. Wilson, Owensboro, Ky., enclosing a very good idea—namely, AN IMPROVEMENT IN TOP STAYS, suggested by the "iron stay," recommended by me for keeping the two (2) back bows of a top apart, and thus assisting to prevent the top from going ahead, by the stretching of the back stays.

Mr. Wilson very truly says, that the back bow is liable to break when the top is down, (with the stay I recommend,) when running over bridges &c., in the country, although I have used them for years, and I cannot call to mind more than 5 or 6 bows broken *from that cause*, or what I supposed was that cause, and then I noticed that the broken bow, in most cases, had what I called dry rot, a species of decay, to which ash, (from which bows are made,) is very subject; still, I admit the bows *might* have worn longer without the stay.

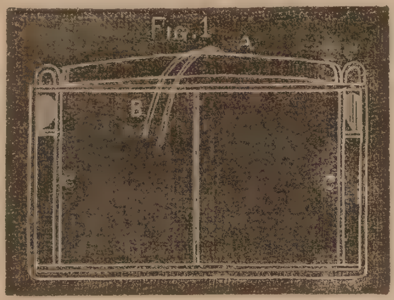
The improvement suggested by Mr. Wilson, is, that instead of putting the stay up under the leather, in roll-up tops—as now done—to make a scroll stay, (or bracket,) one end fastened to the second back bow, (the third from the front,) just under the prop, and the other end fastened to the back bow, at the point where this bow will rest on the prop block, when the top is down, and by this means, throwing all the weight directly on to the rail-prop, and certainly reducing the chances for the breaking of the back bow; it is a good idea. The stay can be made stationary or removable, or with a knuckle like a joint.

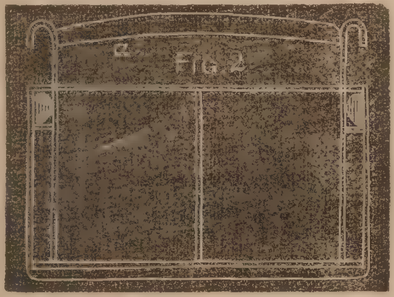
Hickok's Upward Adjustable Extension of the Dash. Rein-holder Attached.

Fig. 1.—A, adjustable extension of dash; B, reins, which are held securely by a spring on the inside; C C, the sockets in which the *dash extension* slides; being stitched in two rows, the appearance is the same as in ordinary dashes.

Fig. 2.—"Extension" raised up, so as to prevent the horse from switching his tail over the lines.

The above improvement, invented by Mr. S. S. Hickok, of Mathuin, Mass., will doubtless be found very convenient by those who drive much, and especially to the ladies. It is light, ornamental, and can be plated, making a perfect finish. A spring at the back, in the centre, holds the reins when the driver wishes to alight. It prevents any wear on the top of the dash, and can be made straight or curved, according to taste.





TRIMMERS' TOP HOLDER.

We are pleased to be able to present to our readers in this department, this new and useful device, invented by Mr. E. Thomas, who is a practical trimmer. The improvement consists in doing away with the necessity of using nails or screws in fastening slats to the bows, during the process of trimming the top. As will be seen by the advertisement in this number, *the Top Holder* can be raised or extended to suit any top buggy or extension-top carriage.

Having seen the "Top Holder" in use by the inventor, we do not hesitate to recommend it to the trade.

An English Tribute to American Carriage Manufacturers.—A gentleman of this city has recently received an order from England for two vehicles of American make. Those built and used across the water are heavy and clumsy, and a foreigner who visits this country for the first time, is almost afraid to trust himself to what seems so frail a support as a Brewster & Baldwin, or Hall's road wagon; or a C. P. Kimball jump seat. He is soon astonished to find that LINDEN SPRINGS AND AXLES with carefully selected wood, iron, bolts and Yankee skill and ingenuity, are equal to the emergency, and that what he regarded as a dangerous vehicle is really quite as safe or safer than the weighty Old Country drags. It is a notorious fact that English carriage horses are sooner used up than those of this country, and mainly for the reason that they are compelled to carry unnecessary loads. Occasionally we have evidence of a desire to overcome prejudice and accept improvements, as is manifest by such a requisition as the one alluded to above.—*Boston Transcript.*

Poetry.

Lines on the Departure of John C. Cay, from the Firm of Aytch, Cay & Co., Coach-Makers, Nevah Wen, Connecticut.

BY GERALD.

O, John, John, John!
We hear that you have gone,
With your addle-pated son,
  And your everlasting clack.
We care not where you steer,
If it be away from here,
So far it is quite clear,
  That you never will get back.

O, very well we know,
When the ground was white with snow,
To pack up your duds and go,
  Was anything but glory.
But this you may depend on,
If the gallows you don't end on,
When blockheads make great men, John,
  You'll be all hunkeydora.

* * *

For the Coach-Makers' International Journal.

A BACHELOR'S COMFORT.

BY JUNIUS.

To-night I'm alone in this dreary "den,"
  With no one with whom I can chat;
The candle burns dimly, all's quiet within,
  For my only chum is the cat.

Cosily coiled in my lap she lies,
  And snoozes away the eve,
She has ceased her purring and closed her eyes,
  And rested her head on my sleeve.

Without, all is dreary and drenching rain.
  The night is darksome with mist,
The storm dashes wildly against the pane—
  'Tis the line storm to which I now list.

The blasts shake the windows and rattle the blind,
  They howl through the pines at the door;
Of fiends on a midnight carouse they remind,
  As they shriek, and rattle, and roar.

What should I do with no kitten to-night,
  To love and to be loved by?
I should certainly be in a wretched plight,
  And could only listen and sigh.

[The kitten awakes and yawns, then jumps upon my shoulder, where she rubs her cheek against mine and complacently purs.]

Ah yes, good kitten, you very well know,
  You're boss of this bachelor's hall,
Prime counsellor over my household affairs,
  And very much loved as my all.

But soon, oh kitten, you'll have to share
  My love and my watchfulness some,
And we, who are now such a happy pair,
  Shall then a glad trio become.

For next month I shall a married man be,
  And the next a home I'll found,
Where kitten, wife, and I, we three,
  Will live and in love abound.

And there in the sitting room, cosy and warm,
  You, kit, in a snug arm chair,
Shall lie and list to the raging storm,
  As it wails on the midnight air.

So bellow ye, winds, and dash ye rain,
  For although I'm alone to-night,
You never shall find me so again,
  If all things work aright.

Remedies and Receipts.

As a substitute for cream in coffee, beat the white of an egg to a froth; put to it a small lump of butter, and turn the coffee to it gradually so that it may not curdle. It is difficult to distinguish the taste from fresh cream.

The following will remove superfluous hair: Lime, one ounce; carbonate of potash two ounces, charcoal powder, one drachm. For use, make them into a paste with a little warm water, and apply it to the part, previously shaved close. When it has become thoroughly dry wash it off with warm water.

Doughnuts.—Three and a half pounds of flour; three-quarters pound butter; one pound sugar; one and a half pennies worth yeast; one and a half pints warm milk; three eggs.

Poor Man's Pound Cake.—Four cups of flour, one tea-spoonful cream tarter, mix well; add two cups sugar, one cup butter, four eggs, stir one-quarter tea-spoonful soda in one cup sweet milk; mix all together and beat well, spice with nutmeg.

Steamed Wheat Flour Pudding.—One quart of sour milk, half a teaspoonful of sour cream, two eggs, one teaspoonful of soda, and a little salt; stir in flour so as to make a stiff batter; steam one hour, and serve with sweetend cream.

Cream Pies.—Make a rich pastry, roll thin, and bake on separate plates. Pour one pint of milk into a dish when boiling hot: stir in two eggs, one cup of white sugar, two large tablespoonfuls of corn starch, two teaspoonfuls of essence of lemon; beat well together and pour upon the lower crust; then put on the upper crust.

Velvet Cakes.—One quart flour; pint warm milk; gill yeast; stir it well; set in a warm place for two hours; work into it when light two large tablespoonfuls melted butter or beef drippings; flour you hands well, then dip your hands into milk and make the dough into small cakes; rub a little butter over the pan in which you bake them—bake in quick oven.

Scraps of Humor.

Old maids are described as "embers from which the sparks have fled."

"There now," said a little girl while rumaging a drawer in a bureau, "grandpa has gone to Heaven without his spectacles."

"Husband, I can't express my detestation of your conduct." "Well, dear, I'm very glad you can't."

The reason given why "Hell Gate" is being widened at New York, is because the people are getting so bad there.

"Well, what is it that causes the saltness of the Ocean?" inquired a teacher of a bright little boy. "The codfish," replied the little original.

An ardent velocipede rider proposes to avert railway accidents by sending a man on a velocipede ahead of every train to give warning of any danger that he may discover.

I say *pitch in*, if yu hit the bottom the fust dive—better knok yure brains out agin sumthing, than tew lean agin the south side ov a korn krib, and let your brains rot in yure hed.

"My son, hold up your head and tell me who was the strongest man." "Jonah." "Why so?" "'Cause the whale couldn't hold him after he got him down."

An old lady entered a shop to purchase a sewing machine, and was asked if she wanted a machine with a feller? "Sakes, no!" said she, "don't want any of your fellers about me."

"Carl Benson" was challenged the other day to find or make a rhyme for velocipede. He did it thus:

"There was a man on a velocipede,
Who said, 'I need not give my horse a feed;
    Without oats or hay,
    He will go all day;
Its a cheap thing to keep, a velocipede.'"

An honest dame in the town of ——, standing beside the corpse of her deceased husband, bewailing in piteous tones his untimely departure, observed, "It's a pity he's dead, for his teeth are as good as ever they was."

"What have you to remark, madam, about my singing?" "Nothing, sir, it is not remarkable."

"No, Biddy," said Patrick to his wife, "yer never cotch any lies coming out o' the mouth o' me." "Bedad, that's thrue," replied Biddy; "they fly out so fast the divil himself can't cotch 'em."

Mrs. Elizabeth Bauer, of St. Louis, asks a divorce from her husband on the ground that he was crazy when he married her. The same remark has been made of many husbands—not by their wives.

"William, my son, how came you to muddy your dress so?"

Willie stopped a moment, then looking his father in the eye, very soberly asked:

"Father, what am I made of?"

"Dust. The Bible says, 'Dust thou art, and unto dust shalt thou return.'"

"Well, father, if I'm dust, how can I help being muddy when it rains on me?"

A few nights since, as a son of the Emerald Isle was riding from Salem to Beverly, Mass., on a horse car, the conductor called for his ticket, but the passenger was unable to find it. "What will I do?" says Pat. "Pay me seven cents," says the conductor. "Murther an' ouns, but I didn't give but six for the ticket!" "Can't help that," replied the conductor, "our fare is seven cents, or a ticket," which sum Pat unwillingly passed over. Soon after he called the conductor, with joy beaming on his countenence, and said, "I've found the divil, now give me back my cint and take the ticket," which was done, much to the amusement of the passengers, poor Pat not thinking he was paying double fare.

Answers to Correspondents.

D. P., St. Hubert, Canada.—For prices of carriage goods in Philadelphia, we would refer you to quotations in our Price Current.

J. A. P., Pinckney, N. Y.—1st. We purpose giving a cut of skeleton trotting wagon in next number. 2d. We know of no book containing *colored* plates of flowers for coach painters' use.

J. L. M., Vincennes, Ind.—Your drawing came too late for this number. Will refer it to Mr. T. Acks for his consideration.

C H., Chester, S. C.—We handed your letter to dealers in this city, but they seemed unwilling to fill your order on the terms specified.

F. B, Lawrence, Mass.—Hope to hear from you in time for next issue.

G. W. B., Derby Line, Vt.—You will see, by reference to D. Board's Department, there is no panels, as represented by "Kimball Buggy," on sale, as yet, by the dealers.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—A body-maker, blacksmith, painter and trimmer—men competent to take charge of their respective branches. None but strictly temperate men need apply. All to go East. Address this office.

Wanted—A No. 1 Painter, who stripes well, and can come well recommended. Address Baker & Bro., Clarksville, Tenn.

Wanted—Two first-class body-makers, on light work. Address Chas. S. Caffrey, Camden, N. J.

AUTHORIZED AGENTS.

Persons desiring to act as Agents for the Journal, will be required to satisfy us of their responsibility and integrity. Those published as Agents are authorized to receipt for subscriptions so long as their names are continued on this list.

Charles W. Veatch, General Traveling Agent.
George B. Hamilton, Agent for Felton, Rau & Sibley.
E. N. Dougherty, Camden, N. J.
M. W. Allen, San Francisco, Cal.
Chas. E. Ward, Rahway, N J.
James D. Burke, Brooklyn, N. Y.
James E. Curtis, Schenectady, N. Y.
H. L. White, Boston, Mass.
John Lodewick, Troy, N. Y.
John Kemp, Ravenna, Ohio.
J. W. Hibbs, Washington, D. C.
F. D. Kennedy, Albany, N. Y.
George D. Fry, Cincinnati, Ohio.
H. Hawthorn, Newark, N. J.
A. L. Merrill, Concord. N. H.
T. B. Nixon, St. Louis, Mo.
Lem. Cretors, Leavenworth, Kansas.
Bryant & Stulen, Towanda. Pa.
James J. Wright, Lowell, Mass.
Brigham & Warren Three Rivers, Mich.
Adam Meisel, Wilmington, Del.
R. H. McDanel, Wilmington, Del.
J. B. Edwards, New Haven, Conn.
Joseph Brown, West Troy, N. Y.
E. H. Murray, agent for Felton, Rau & Sibley.
E. Huested, agent for Felton, Rau & Sibley.

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

Philadelphia, January 25, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.

" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 35 per cent. discount.

Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.

Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.

Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.

" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50

Axles, Wilmington, C. H. Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.

" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.

" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11: 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.

" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

" Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Axles, Archimedian, short, improved taper, No. 1, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $7.75; 1⅜, $10; 1½, $12.50.

Axles, Archimedian, Half pat., taper No. 3, ⅞ and 1 in.,; $6.00; 1⅛, $7; 1¼, $8.25; 1⅜, $10.50; 1½, $13.

" " Long, improved taper, No. 2, ⅞ and 1 inch, $7.50; 1⅛, $8.50; 1¼, $10.25; 1⅜, $13.50; 1½, $16.50.

" " Half pat., No. 4, ⅞ and 1 inch, $8.00; 1⅛, $9; 1¼, $10.75; 1⅜, $14; 1½, $17

The Archimedian axles are all case hardened; they can be made of Salisbury and Lowmoor iron at an average advance on prices here quoted of $1 to $2.50 per sett. An axle of this brand is also steel converted by the celebrated Bessemer process; it cannot be excelled. Price of short half pat., per sett, ¾ inch, $11; ⅞, $12; 1 inch, $13. Long do., ¾, $13; ⅞, $14; 1 inch, $15.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 35 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1; 1 inch, $1.30.

Buckram, per yard, 17 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.

" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, per doz., japanned and sil., $1.10 to 1.50.

Damask, German cotton, double width, per piece 30 yds., $16.50 to $18; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 80c. per yard.

Dashes, buggy, per dozen, rough, $20; silver plated, $28. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 35c.; 6-4, 53c.; drilling, 5-4, 48c.; 48 inch, 52c.; 6-4; 62c.; duck, 5-4, 67c.; 50 inch, 70c.; 6-4, 80c.; pat. tan back muslin, 5-4, 48c.; do., drill, 5-4, 60c.; 48 inch, 65c.; flock drill, 48 inch, $1.00; do., muslin, 85c.; vul. rubber drill, hea., $1.50; light, $1.50; 48-inch,

Felloe plates, wrought, per lb., 16c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch. $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.: No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50: silver capped, 60c.; silvered, $1.50; do., English, $3.50.

" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Patent Improved Knob and Buttonholes, a good improvement, $6 per gross.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.: narrow worsted, 8c.; silk stripe, 10½c.; silk barred, 13½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 16c., do., No. 2, 13c.; railing and collar, 25c. to 28c.; enameled top, No. 1, 26c. to 29c.: do., No. 2, 24c. to 26c.; enameled trimming, 26c. to 28.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $5.00 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

" spoke ten. machine, each, sm., $15; large, $25.

" bolt cutting tenoning machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 12c.

Name plates, per do., en., Ger. sil. and real sil., $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.: do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, star and flint, per ream, $4.50 to $6.00.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.

" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.

" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, patent black, $11.75; do., Bright, $13.75; Baltimore patent black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.

" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $3.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95, 1⅛. $2.10; 1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $2.05; ⅞, $2.20; 1 inch, $2.35; 1⅛, $2.50; 1¼, $2.65.

" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.

" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.

" ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.

" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6

" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8; 5 bows, $10.50.

" " N. Y. pat., per doz. sets, 4bows, $12.

" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.

" plated, short, $1.20; 1 long iron, $1.37.

" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ in., 1c. per lb. more.

" Bright tempered, per lb., 1¼ in., 20c.; 1½ in., 19c.

" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top props, silvered, per sett, common, 31c.; extra, 70c. to 90c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.

" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.

" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.

" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.

" " Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 55c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per doz., No. B, $3.50; No. C, $3.75.

" improved, all black, per dozen, $1.75; black, silver top, $2.

" imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.25 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.

" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

" white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.

" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in. diameter, $2 to $2.25 per set,

Poles, hickory, per dozen, rough, $12; finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in.. $11; 1¾ in., $12; finished do., $12; Sleigh, $21.

" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts, express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

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Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 50c.; pure Paris, 50c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Vermillions—English pale, $1.60; deep, $1.50, German gothic pale, $1.50; deep, $1.50; Chinese, $1.60; Trieste, $1.25; Italian, 45c.; American, 35c.; English Venetian, 5c.; red lead, 15c.

Whites—Pure lead, per lb., 14c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c.; English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 65c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.: 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1: Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

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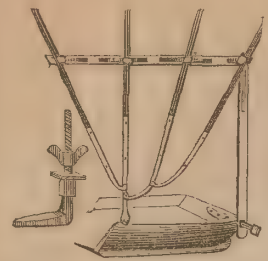

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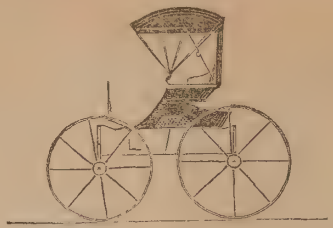

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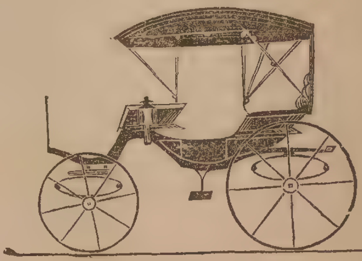

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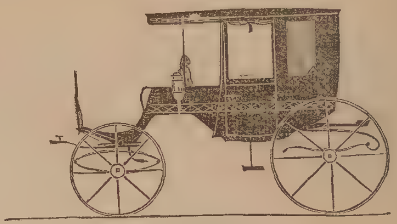

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COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. IV.—No. 6. MARCH, 1869. $3.00 PER ANNUM Always in Advance.

DIFFUSION OF KNOWLEDGE.

When we look back and consider the state of mankind during the ages that are past, it presents a melancholy scene of intellectual darkness. Although, in every age, men have possessed all the mental faculties they now or ever will enjoy, yet those noble powers seem either to have lain dormant, or, when roused into action, have been employed chiefly in working wickedness. Hence the page of history chiefly presents to our view a record of events of the most revolting character.—scenes of war and devastation, as if the earth had been created merely to serve as a theatre for mischief, and its inhabitants for the purpose of destruction and misery to all around them. Such are the natural consequences of the reign of *ignorance* over the human mind.

The active powers of man naturally follow the dictates of his understanding, and when the mind has not been directed to the pursuit and contemplation of noble and benevolent objects, it will most frequently be employed in devising and executing schemes calculated to destroy human happiness, and prevent moral improvement. Amidst the darkness which, in ancient times, overspread the world, *some* rays of light appeared in the Roman and several other empires, but its influence upon the surrounding nations was extremely feeble, and was doomed to be speedily extinguished. A victorious army of barbarians overrun the Roman empire, at that time the principal seat of knowledge, and in their progress overturned and almost annihilated every monument of art and science then existing. They made no distinction between what was sacred and what was profane.

Amid all this din of war and overthrow of kingdoms, the voice of reason and religion was scarcely heard, and every benevolent feeling and moral principle was trampled under foot, and the inhabitants, instead of cultivating again the peaceful arts and sciences, assumed the character of demons, and gave up to the basest of passions, until they appeared on the brink of total extermination. This state of things continued until about the time of the revival of letters, when the moral and intellectual state of the people of Europe began to experience a change ominous of better times, and a more enlightened era. A spirit of civil and religious liberty then burst forth; seminaries of education were erected; the art of printing was invented, and gave a new impulse to the minds of the people, and prepared the way for a diffusion of useful knowledge among most of the nations, but was confined chiefly to the higher circles of society. There also issued from the press many popular works on natural sciences, but it was not until after the era of the French revolution that knowledge began to *progress*, and shed its influence on the middle and lower classes.

Although feelings of regret and horror are awakened, when we look back and recall the scenes of bloodshed which accompanied that political convulsion, amid all the evils, it was productive of much good. It tended to undermine the systems of tyranny which then enslaved the nations of Europe, and roused millions from among the masses of the people, to assert those rights and privileges to which they are entitled as rational beings. But Europe, where the light of science first shone, is at the present day but faintly enlightened by its beams. The poorer classes of society on the continent are sadly deficient in that degree of knowledge and information which every human being should possess.

If we inquire into the causes which have retarded the progress of general knowledge, it can probably be traced to the form of civil government prevailing in that portion of the world, and also the established form of religion incorporated among them. It is a favorite maxim of all tyrannical governments, that the masses of the people should be kept in ignorance, and hence, we find in the empires of the east, the people are debarred from the temple of science, and sink into a state of the grossest ignorance and servility.

We may frequently determine the degree of mental cultivation which prevails among any people, by the nature of government under which they live. For, wherever the energies of the human mind are exerted with vigor, in acquiring and spreading literature and science, the spirit of liberty will predominate.

The instruction of the general mass of society is the most solid basis of a good government, and the greatest security for its permanence. It is also a sure safe-guard against vice; hence the benefit to all socially.

The diffusion of intellectual light should go hand-in-hand with moral renovation, for vice and ignorance, especially among the lower classes, are almost inseparable.

That the general diffusion of knowledge, among all ranks, is an object much to be desired, no one will dispute, who regards the mind of man as the noblest part of his nature, and who considers that on the exercise of these powers his happiness depends. If ignorance be one of the chief causes which prevent the harmonious action of the machinery of society, by removing the cause, we, of course, prevent the effects, and if knowledge be one of the main-springs of virtuous conduct, the more it is diffused among the masses the more extensively will it bring into action those virtues it has a tendency to produce.

The more learning a people have the more virtuous, powerful and happy will they become, and to ignorance alone can the contrary effects be imputed; and in order that such a state of things should be brought about, it is necessary that every exertion and means should be used to accomplish this desirable object. This can be effected in a measure by the general distribution of books, of both a moral and scientific nature, among the youths of our community.

AN HOUR AT THE VELOCIPEDE RIDING SCHOOL.

An hour or two spent at a Velocipede Riding School affords much innocent amusement to the spectator. On our recent visit to one of these schools in this city, we were agreeably entertained, watching the experts in their skillful management of the vehicle, and convulsed with laughter at the awkwardness of new beginners. It is said "laugh and grow fat" We did our full share of laughing, regardless of consequences, and whether it increased our weight or not, we feel satisfied that we lost nothing.

Shortly after entering the room, a young gentleman, of faultless exterior, stepped up and paid fifty cents for an hour's practice. The obliging "Principal" put him in possession of a "horse," and after a few words of instruction as to its management, left him to attend to others. The young gent grasped the "horse" with such an air of confidence in his ability to manage it, that we expected to see him move off in good style at the first attempt; only a few moments' trial were necessary to convince him that he had "caught a Tartar."

He labored faithfully, showing a good deal of courage and determination to tame the "fiery steed;" but he was doomed to disappointment. The magnetic influence of the walls and pillars continually attracted him, subjecting rider and "horse" to some very severe shocks. A wag suggested to him the propriety of "putting up that young horse, and trying one that had been broken to the saddle." He smiled grimly and pressed forward, still endeavoring to place his feet in the stirrups, which he found impossible to do. A loud crash, followed by a roar of laughter, soon disclosed the fact that our young man was handsomely thrown, his head coming in contact with one of the pillars, and the velocipede quietly lying on him.

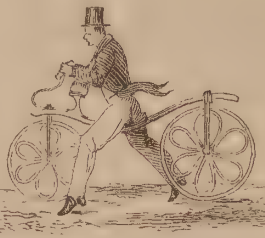
He was unable to extricate himself without assistance, which was speedily rendered. Having regained his feet he led the *colt* to his stall, muttering a curse on velocipedes generally, and then suddenly left the room, no doubt convinced in his own mind that the velocipede was a humbug.

Some persons learn to ride and manage the contrary machine in a few hours, while others require several days' practice. The first attempts, however, are always attended with more or less vexation.

Among those who were called good riders we noticed but two or three who sat gracefully, and appeared to apply the power with perfect ease. A corpulent man, or one who is very tall, does not show off to good advantage, being so large in proportion to the size of the "horse;" but, as the velocipede was made for man, and not man for the velocipede, we will have to accept the riders as they run.

In the December number of the JOURNAL we stated that the velocipede was originally constructed by "having two wheels placed one before the other in the same line, and connected by a beam on which the person sits astride, and propels the vehicle by striking the tips of the toes against the earth."

Desirous of placing before our readers whatever may be of interest with reference to the velocipede, we take pleasure in adding the following cut, which will give a better idea of the original form than words can convey.



The gentleman who is pictured, with coat-tails streaming out behind, and feet widely separated, seems to be going at the rate of ten or fifteen miles an hour. He is certainly working his passage, but as it is play and not work, we judge he will not complain when he finds, at the close of the exercise, that he is sore and fatigued.

At the riding schools, the first lesson given is to learn to "lead your horse" around. Now this at first sight appears to be a trifling matter. You see the teacher grasp the steering pillar-handle with one hand, and place the other on the connecting beam, and walk leisurely along, guiding his horse with perfect ease. He moves forward in a straight line, curves to the right and left, describes the circle, keeping the "horse" erect, without any oscillating motion.

He returns and places the *gentle animal* in your possession. You take hold of him as directed and start, feeling confident that *you* can perform so simple a feat. You attempt to go forward, but the *unruly animal* says no, I wish to go sidewise, and you must obey. Should you determine to move to the right, you may be compelled to go to the left. A curve is undertaken; be careful, for if the mulish creature gets the start of you he will be apt to flap over on his side, and land you sprawling on the floor.

Should this happen, a loud laugh from the spectators will not have a tendency to relieve your embarrassment. Having learned to lead your "horse," you will be prepared for the

SECOND LESSON.

Stand by the side of the *colt*, seize the handle and spring into the saddle, keeping the feet free from the stirrups. Attempt the forward motion by striking the tips of the toes on the floor, then, without using the stirrups, endeavor to balance yourself. Two or three hours' practice in this way will take some of the *mettle* out of your "steed," and place you on better terms with him.

THIRD LESSON.

Lead your "horse" out gracefully from his stall, mount, put him in motion as before stated, and while the treadles are revolving, apply one foot, keeping the other free to guard against accidents.

Having gained some confidence in your ability to "sit the critter," you may with safety use both stirrups.

After having learned to keep the velocipede erect, while propelling it with both feet, you will soon acquire any other motions of which it is capable.

IS A TRADE HONORABLE?

It is a lamentable fact, since the days of shoddyism, that money and dress are becoming more absolutely the test of respectability. It matters not how ignorant or uncouth in manners if the purse is filled and the dress stylish.

How frequently we hear the remark contemptuously made: "Oh! he is nothing but a poor hard-fisted mechanic; he smells of the workshop," and the dress ridiculed on account of it being a few months behind the style; often, too, by persons very inferior in intellect to those of whom they are speaking.

It is with regret we find that many of our mechanics are so weak-minded as to allow these opinions to embitter their feelings and give them a contempt for their trade. They will discourage all desire manifest in their children to learn a mechanical branch, and make every effort in their power to obtain situations for them, as clerks, in some fashionable establishment where their salary is spent in personal adornments, and the only employment for the mind is counting out yards of silks, laces and ribbons. Truly, a *high calling* for one of the noblest works of God's creation.(?)

Now, who has the most honor? Can the rich lady who has just laid down the hundreds of dollars make use of these articles without the aid of the sewing girl? Take care! The smell of a mechanic might be found upon them before she robes her mortal frame in their elegant folds.

To whom is she indebted for the carriage in which she rolls away so luxuriously, or the speck of a bonnet which crowns her lofty head? Did the handsome gloves, or stylish boots, grow on trees, to be gathered at her leisure? Ah! there is nothing which her gold can purchase to add to her comfort or pleasure but has passed through the hands of the "hard-fisted mechanic." Indeed, without their aid, this moneyed lady would present a sorry spectacle; something the same as Eve did after the fall. In place of Mother Eve's apron of fig leaves the moneyed lady may use greenbacks, but even they have been contaminated by close proximity to mechanics. But the mechanic is not a mere machine to grind out the various articles so necessary to the happiness of mankind; he has a mind capable of as high a state of cultivation as any of the moneyed aristocrats or "shoddies," and, in many instances, have proved themselves men of superior genius. The various kinds of machinery, from the most complicated of steam-power down to the most simple in use, stand before us as proofs of the high position the mechanic should hold in the social scale.

Why should not the mechanic and the capitalist stand upon the same level at least? One can do nothing without the other. Capital is necessary to the man who manufactures, and the manufactured wares are as indispensable to the man of wealth. The mechanic of cultivated mind, good moral principles and gentlemanly manners, is certainly as much an honor to society as many of the weak-brained fops who, decked out like butterflies, flutter around the gay circle of society, answering finely as dummies to show off the goods of their employers. Honesty, truth and virtue are commendable, whether clothed in the garb of a mechanic or the broad-cloth of the aristocrat.

A VISIT TO THE BRUSH MANUFACTORY OF CHARLES D. THUM.

With a view of giving our readers some information in regard to the progress made in the manufacture of brushes, we called in at the establishment of Charles D. Thum, No. 150 N. Third street, Philadelphia, and were astonished at the variety of brushes manufactured suited to every occupation or business; the jeweler, the silver plater, the printer, the saddler; in fact, every trade may here find something of utility.

The coach-maker will here find an assortment of the best varnish brushes. The horse dealer may take his choice at $60 per dozen, among brushes suitable for smoothing down the famous DEXTER. Hat and cloth, jewelers' and dentists' brushes, of over 250 varieties, are manufactured, and sent to all parts of the United States. The common hand scrub and dusters, such as every corner grocer keeps, are here found in endless variety.

Buffalo back hair, inlaid with pearl; brushes of brass wire, of German importation, for the polishing of silver ware, and even glass, spun as fine as human hair, is made use of in the manufacture of jewelers' brushes. Brushes for frosting glass and cleaning boiler flues; shoe brushes suitable for the boot black or the most aristocratic merchant.

We were shown a patent shoe brush enclosed in a case, the small dip being screwed to the top, the polishing brush to the bottom, and a box of blacking enclosed, all taking up no more space than an ordinary shoe brush. It has many advantages over the old loose arrangement, being far more compact and cleanly. The traveler can place this neat little article in his trunk or carpet sack, without danger of soiling the clothing. When this little japanned box was handed to us, we were somewhat puzzled to guess what it could contain, and was surprised to discover on opening it, an article described above.

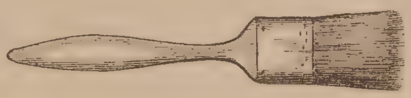
Wall brushes for the colored whitewasher, or the neatest housekeeper. Brushes for, in fact, almost everything and everybody.

But what we called in particularly to look into, was the method and conveniences for manufacturing the celebrated HALF-ELASTIC and BRISTLE VARNISH brushes. These brushes, having already acquired a wide reputation among coach painters, cannot be excelled in the quality of the stock used, and the readiness with which they may be applied to carriage work.

The half-elastic brush used for laying the finishing coat of varnish, is now so highly prized by those who have tried them, that the owner of a set would not part with them at treble their cost, if the set could not be replaced.

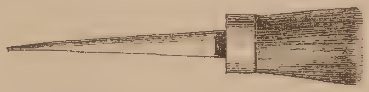
It is as essential to the proper finishing of a fine piece of work that the painter should have a good brush, as that he should wash the job clean and keep clean cups. He must have a brush that he can depend on, one that will lay the varnish smoothly and not shed the bristles, or get loose in the hair. These brushes supply that want.

The flat brush is made as shown in the following cut:



Like the ordinary make of flat varnish brushes, it has a double row of nails, is pointed like a wedge, with the natural end of the hair, and not, as one would suppose, with the ends clipped off, as this would cause the brush to streak in varnishing.

The oval brush is made as represented by the cut here given:



It is similar to the ordinary wire-bound varnish brush, but with copper ferrule or band, and the handle cut to correspond, (inside,) with the wedge shape of the brush. Both brushes being made of the same material, all bristle or half elastic.

The procuring of the hair is attended with much difficulty, Mr. Thum having been compelled to send to France and Turkey for it; being very scarce it commands a high price.

By examining his bristle brush with a magnifying glass, it may be perceived that the hair or bristle is of a different shape from those of other makers.

The main points or advantages are:

1st. The brush is brought to a sharp feather edge, like one that has been in use a number of years, and does not require wearing down like the generality of varnish brushes, but is ready for immediate use.

2d. The hair does not curl or twist, being prepared beforehand by a process which effectually prevents any variation, thus furnishing a brush which will lay the varnish evenly and smoothly from the first.

3d. It will stand. This is a needed improvement, as nothing can be more annoying to the painter, while engaged on a fine piece of work, than to have the hair, or bristles, come out over it while varnishing, thus spoiling, in a few minutes, the work of hours.

We also paid a visit to the apparatus for preparing the hair, by the assistance of which and another application he is enabled to fill a brush with as much hair as another maker would put into one a size larger.

By giving personal attention to their manufacture, together with the experience of years in this branch of the trade, he is enabled to "turn out" the best varnish brush made.

ZELL'S POPULAR ENCYCLOPÆDIA AND UNIVERSAL DICTIONARY.

Number seven of this work has been received. Like the preceding numbers this is replete with valuable information. Containing but eight pages of matter, the reader will not become wearied, or be apt to skim over it lightly, as is too often the case in larger works. It is issued weekly by T. Elwood Zell, of Philadelphia, at the extremely low price of ten cents a number, free of postage.

"It will aim to supply in its TWO VOLUMES, (each about the size of a large family bible,) and 125,000 articles, information covering every variety of knowledge, making it the cheapest and most complete encyclopædia in the world." Two numbers, each week, will be issued shortly, the work to be completed in two years, at the cost of $25 or less.

"As an encyclopædia of DOMESTIC ECONOMY, applicable to the every day uses and demands of the household, its value must be apparent to all. In ARTS, SCIENCES and TRADES, it will give a faithful account of the development of every branch of industry, and of important inventions.

"As a DICTIONARY OF LANGUAGE it will contain all the words in use in the English language, the etymology and various meanings, together with examples of the proper use, according to the authority of the best authors and most learned lexicographers."

Journeyman and apprentices of our craft should avail themselves of this opportunity to secure a work of such inestimable value. Ten cents a week is a trifling sum, and yet if that amount be not *properly* invested it may lead to ruinous expenditures. Habits formed in early life are not easily broken off when we arrive at manhood, and in the retrospective glance we see plainly the folly of our past course.

It is of the first importance, then, that we lay the foundation in youth for a life of usefulness and profit to ourselves and others, by jealously watching the spare change we may have left at the close of each week, after paying all necessary expenses. Young man, if you should, during your apprenticeship, have only the trifling sum of ten cents, over and above your necessities each week, and spend *that* amount for alcoholic drink, or any other hurtful stimulant, rest assured you will mourn over your conduct in after life.

It was the *first* drink which brought the poor inebriate down to the depths of shame and poverty. The first fiery draught demanded the second, and so on until the habit was formed, and the *disease* fastened itself firmly in the system. If, on the other hand, you keep company with the temperate, and with those books which ever point you onward and upward in the path of duty, you will have but few regrets when age steals in upon you.

Purchase good books with your spare change, for at the fountain of knowledge you may drink deeply without fear of harm.

HO! FOR THE NEW ENGLAND STATES.

Bidding a reluctant adieu to the good people of New Bedford, we started at ten o'clock for Taunton, arriving at 11 o'clock. Here we were greeted by a merry jingling of sleigh bells, which gave to the city quite a lively appearance. The ladies and gents were out in style, flying hither and thither in their gaily decked cutters. The ladies were radiant with smiles, and why not? They had nothing to pay, not even the trouble of hitching or unhitching the horses. We imagine we hear the beaux singing, at the close of the day,

> "Bells a jingling all the day,
> Money spent and thrown away,
> O! there is the deuce to pay
> When a man goes out a sleighing."

Served them right. Peck & White, carriage-makers and dealers in robes, harness, &c., were full of business, and doubtless anxious for the sleighing to continue until the month of April. A terrific rain-storm, passing through that section of country, on the evening of the 8th, put an end to the sport, and we accepted the situation with others, who, doubtless wished it otherwise. Taunton is a stirring place, but has no great amount of capital invested in the carriage business. The principal builders are Peck & White, and Leonard W. Rand. W. H. Stilson and lady will accept our thanks for their kindness.

From Taunton we turned our face toward the "Hub of the Universe." We spent a week in Boston, visited a large majority of the shops, met scores of old subscribers, and added many new ones to our list. We were not refused admission into any establishment, and came to the conclusion that the employers in Boston are not to be classed with those who count every tick of the office clock.

Having heard from the time we commenced our apprenticeship that they spent more time in completing a carriage at Boston than at any other city in the Union, we naturally turned our attention to this matter to ascertain the truth of the statement. We cannot say positively whether the work wears better than that built at other large cities, but we are inclined to the opinion that it does. The trade being mostly local, the builders endeavor to produce the most substantial work. They make their own bolts, clips, &c., of the very best iron, and, in fact, every part of the carriage is constructed with a view to strength and durability; a great deal of time is consumed, and the value of the work considerably enhanced.

The appearance of the heavy work we saw running on the streets, was not so grand and dashing in exterior as is common at New York. The colors used are generally dark and rich, no excess of striping is seen. The ornaments are mostly a plain shield, with or without a monogram in the centre.

The "Goddard" buggy appears to be a great favorite at Boston and vicinity. It is not what we would call handsome, and rather too heavy to suit other sections of the country. The price ranges from $600 to $650.

Business was quiet; the sleigh trade was lagging for want of the needful snow. At the repositories the gaily finished "Portlands" were occupying every inch of space to spare, much to the annoyance of those who had invested in them. Not having the power to bring down the snow, and send them out on their merry-making errands, things looked gloomy.

With the jingling of the sleigh bells would come, of course, the jingling of the cash, and the whole community would feel the enlivening effects.

In Sudbury street, where there are several large repositories, we saw a sufficient number of sleighs, one would think, to supply the United States and Alaska. We found but few cases of *velocipede fever*. At one shop they were building two; a three and a four-wheeled one. There were two or three of the French pattern in the city, but the majority of the people shook their heads knowingly when informed that they were capable of being kept erect and managed by a human biped.

The leading builders are James Hall & Son, Thomas Goddard, Wm. P. Sargent & Co., and Sargent & Ham. Hogarth's "line of beauty," is everywhere displayed in the streets of Boston, the serpentine form being the favorite. We studied navigation to our heart's content, and on the morning of the 14th *wormed* our way to the Lowell depot, and after an hour's ride hauled up at Lowell.

There are five or six shops at Lowell, Mr. Converse carrying on the most extensively. "Lowell is celebrated for its cotton mills and appropriately styled the Manchester of America." The Merrimac and Boote mills are the largest, employing some four or five thousand hands. The builidings are of immense size, fenced in, and the notice, "No admittance except on business," conspicuously displayed at the entrances. As we had no business to transact within the sacred walls, we contented ourself with watching the throng of female operatives as they poured in through the gateways in answer to the call of the deep-toned bells summoning them to work after the dinner hour. We next visited Lawrence, also noted for its manufactures. The largest cotton mills in the States are situated here. There are three or four respectable carriage shops, the largest being that of Messrs. Gale & Ames.

Assisted by one of our old subscribers, Mr. Frank Blaisdale, we secured quite a respectable sized club for the JOURNAL. Mr. Blaisdale is a finished workmen, and has lately patented an improvement on the front seat, for jump-seat buggies. We spent a few pleasant hours at his cozy little home in the suburbs, which overlooks the Merrimac River, and would here acknowledged our indebtedness to himself and wife for the marks of kindness shown us, a stranger, but there is no rest for the traveler—push ahead is the watchword.

[TO BE CONTINUED.]

APOLOGY.

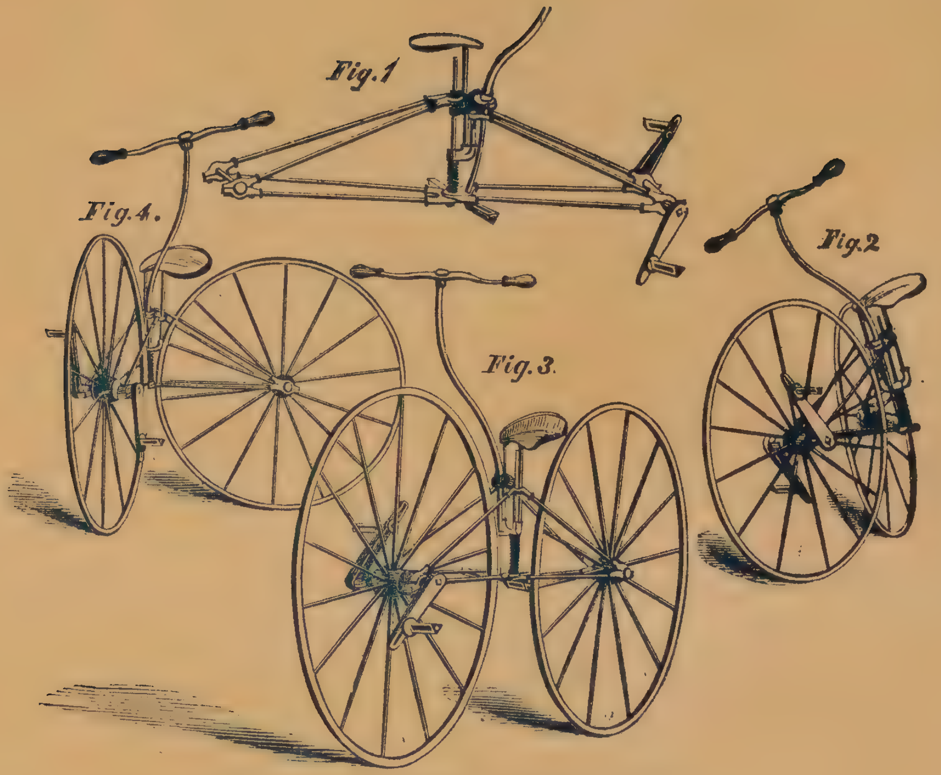
In the last (February) number of the JOURNAL there appeared "Lines on the Departure of John," which should not have been inserted, but coming from a valued correspondent they were not scrutinized as carefully as they should have been. While we are obliged to notice occasionally our cotemporary in a rather personal manner, we do not purpose to throw our columns open to the personal differences of our readers.

CROWDED OUT.

Owing to the lateness of their reception, and the large amount of useful matter furnished this month by P. Alette, we are reluctantly obliged to lay over a large portion of "Fred. Pumice's" article on "Threads from the Memory of an Old Cushion;" also, Henry Harper's very important article on the Science of Setting an Axle. Articles, to insure insertion, must be received on or before the 15th of the month.

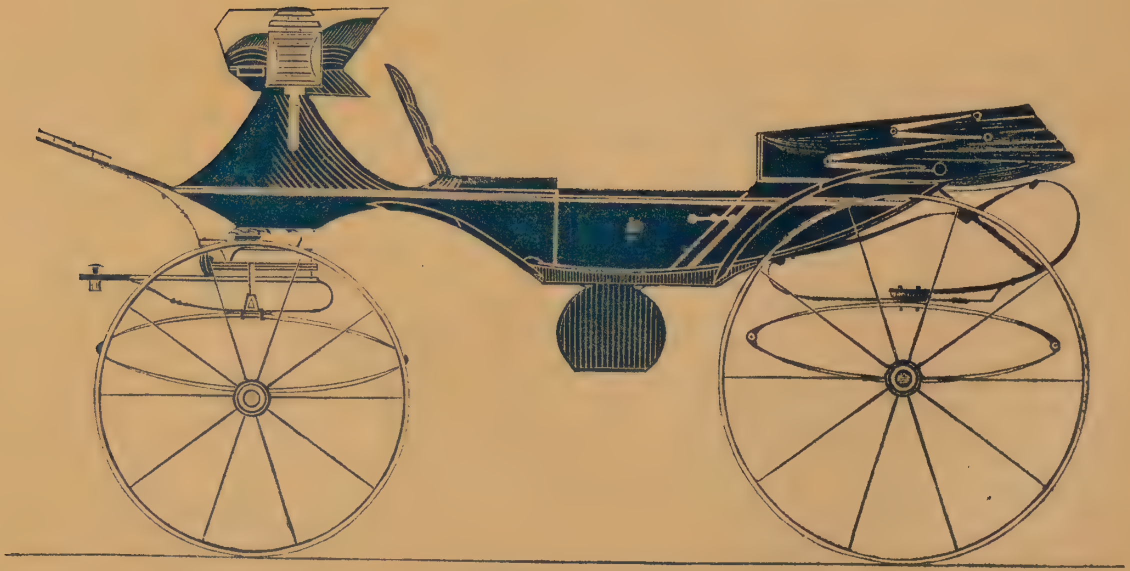
GOLD PAINT.

To those who have not used the gold paint and wish to find a substitute for gold leaf, or to do away with the necessity of laying on size for bronzing, we would recommend the use of H. Bessemer & Co.'s gold paint. It is put up in small packages, containing two bottles, one filled with gold bronze, and the other a liquid in which to mix it. Painters who have used this preparation recommend its use. It is entirely different from another article in the market called "liquid gold;" the latter being unfit for carriage work, if we may believe the reports we hear from those who have tried it. Price, post-paid, $1.25.



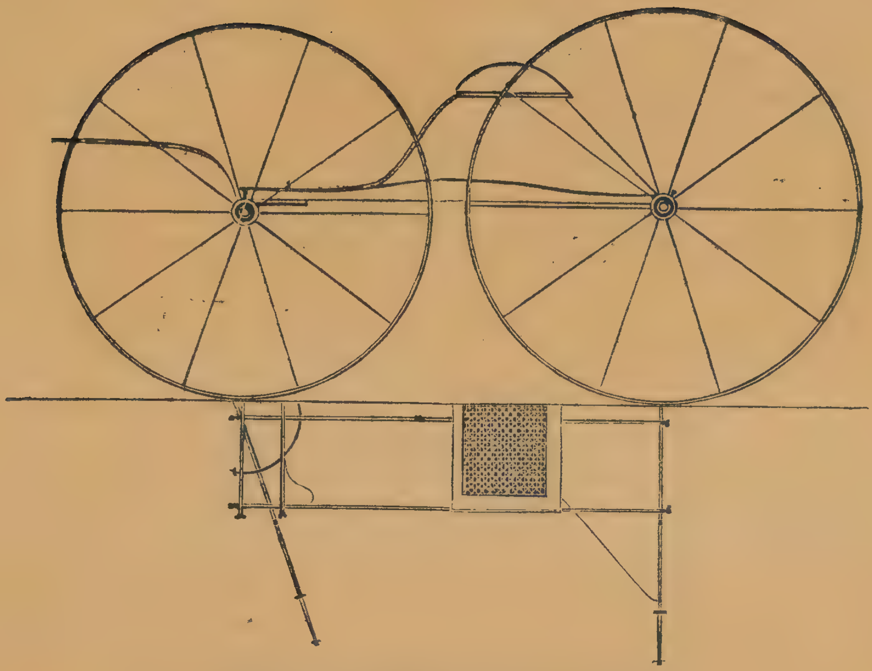
LAUBACH'S PATENT VELOCIPEDE.

Plate No. 21.—Perspective View.—Explained on Page 85.



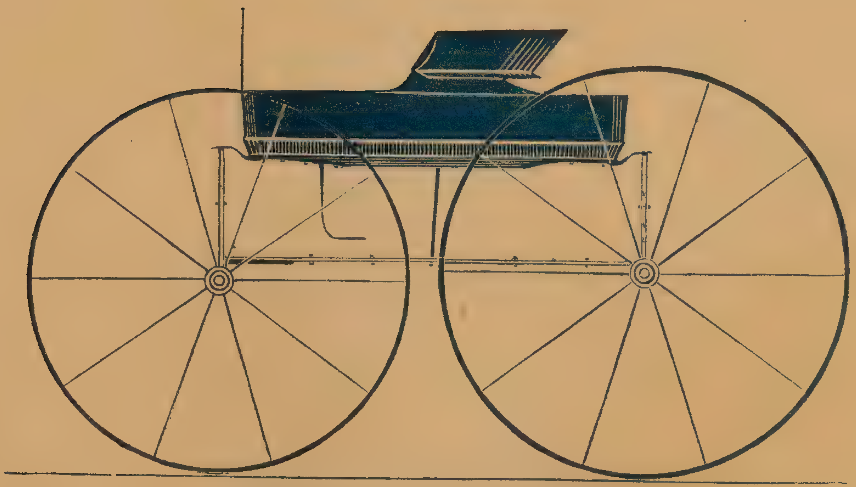
CLARENDON BRETT.

Plate No. 22.—Half-inch Scale.—Explanation on Page 85.



CAFFREY SKELETON TRACK WAGON.

Plate No. 23.—Half-inch Scale.—Explanation on Page 85.



MONITOR PIANO BUGGY.

Plate No. 24.—Half-inch Scale.—Explanation on Page 85.

Fashion Plates Explained.

LAUBACH'S PATENT VELOCIPEDE.

PLATE No. 21.—We have taken considerable trouble to procure, for the benefit of our readers, this cut of a Velocipede that far outstrips anything we have yet seen or heard of, and in order to bring it out as distinctly as possible, have given it the place of one of our fashion plates.

The inventor, Wm. H. Laubach, M. D., of Philadelphia, has stepped out of the beaten path, in the construction of this vehicle, by doing away with the connecting beam, and substituting a truss-work, which is placed below the tops of the wheels, and connected by joints between them.

The seat is placed on an upright bar, which connects with the main shaft resting on a spiral spring. The great advantage in this, over other velocipedes, is, that the seat is always on a line with the front wheel. Whatever position the vehicle assumes, the rider still has the use of the stirrups.

Fig. 1 shows the truss work and connections. Fig. 2, the Velocipede in the position it assumes when being turned short. Fig. 3, as it appears in a perspective side view. Fig. 4, also shows the vehicle on a curve.

Dr. Laubach has a school at the corner of Twelfth and Buttonwood streets, Philadelphia, where we have often witnessed this wonderful contrivance in its varied movements.

We will give a fuller description of this in the April number, and conclude this notice by a paragraph taken from the *Eclectic Medical Journal* for January:

> "The exercise by the new American velocipede is free from every kind of objection—being a natural exercise of every muscle of the body, and, therefore, an invaluable means of promoting health.
>
> "The best and most scientific velocipede is that invented by Wm. H. Laubach, M. D., of Philadelphia. It is constructed purely on physiological principles: has two wheels, one before the other—the seat between. The instrument is made of brass and iron, strongly made but light. Pedals receive the feet, one on each side, and by these the motion is chiefly communicated. The movement of the feet is precisely the same as in walking, and with it the inventor has traveled one hundred miles in five hours. A handle in front serves to aid the rider in turning, which he can do at almost a right angle. The grand leading points in anatomy and physiology have been brought out in beautiful harmony by this perfection of art.
>
> "We look upon this mode of exercise with this physiologically constructed machine as one of the most brilliant discoveries of the nineteenth century; the grand desideratum that will emancipate our youth from muscular lethargy and atrophy that is so common."

CLARENDON BRETT.

PLATE No. 22.—This beautiful and original design, which needs no praise to recommend it to favorable notice, stands before the reader a thing of beauty. Its variety of lines and delicate proportions have not, we think, been equaled by any plate heretofore given in this country. The right or straight lines at the top and bottom give full effect to the sweeps, and the back beveled lines of the body are all that could be desired. The side wings, sweeping with the body, add much to stylish appearance of this vehicle.

Width of body, 48 inches over all. Bows all framed to suit the body, the two front ones 48 inches, and decrease each bow one inch until the fifth, which is 45 inches. Turnunder: 3½ inches. Chamfered mouldings: 1½ inches deep. Width of boot: 30 inches. The round boot is taken from three or four inch poplar, or whitewood, until the desired height is obtained, and, when cleaned off, covered with raw hide, the edge finished with a neat moulding. For rocker plates use Bessemer steel, 2⅜ by ½-inch, which is greatly superior to iron in stiffness; the difference in cost is not to be considered on a good job. In fact, it is cheaper than iron, as it saves the time and expense of altering the doors, which has to be done when the plates are not strong enough to support the weight when the carriage is loaded. The front lid to be hung on concealed hinges.

DIMENSIONS: Hubs: 7½ by 4⅞. Front band, 3½; back, 4⅛. Spokes: 1⅜; depth of rim, 1 7-16. Tire: 1⅜ by ⅜. Axles; 1⅜, arched 2½ inches. Front spring: 1¾, 39 long, 5 plates, 14-inch open; back spring: 1¾, 39 long, 5 plates, 12½-inch open. C spring, same number of plates, and same width. Wheels: 3 feet 4 inches and 4 feet. Track: 5 feet.

TRIMMING: French morocco or brown cloth.

PAINTING: Body: purple lake. Carriage: black, striped with half-inch line of lake, centred with an eighth line of gold.

MOUNTING: gold. Face plate to hub, caps to joint nuts; toe-board handle and dicky-seat handle to be plated. Door handles: 3 ball, octagon middle.

(For this, and other new patterns, see Wm. BURWELL's advertisement, on the inside of back cover. Mr. Burwell gives his undivided attention to the manufacture of *mountings*, and cannot be excelled in workmanship and beauty of design. His new pattern of CROSS STRAP BUCKLE is very pretty, making a finish superior to any former design. To carriage-makers, far and near, we would recommend the goods of this house, knowing that they will be well suited. Mr. Burwell, having been greatly benefited by his former advertisement, in the JOURNAL, has, as will be noticed, increased its size, thereby acknowledging that the JOURNAL is the best advertising medium in the country to reach the consumer direct.)

Inside handles: ivory, with gold band. Pole crab: full plated. Cross-strap buckle: double diamond pattern.

LAMPS: Topaz finish.

CAFFREY'S SKELETON TRACK WAGON.

PLATE No. 23.—This draft was kindly furnished by MR. CAFFREY, who has established a wide reputation for *first-class* light work. A visit to his factory, in Camden, N. J., opposite Philadelphia, will be sufficient to convince any one that he builds as light work, (if not the lightest,) as can be found in the country. Using nothing but first-class stock, in every part of the vehicle, his work stands well, and, of course, gives good satisfaction. An admirer of fast horses, and driving a great deal himself, he more readily detects any imperfections in his wagons. This, we think, will account, in a great measure, for the superiority of his work.

DIMENSIONS: seat, 13 by 20 inches in cane bottom, silver rail each side as shown by draft. Spars set 20 inches apart from out to out, 1 inch square, arched 1 inch, ¾ by ⅝ at ends. Double perches, ⅝ by ¾; length; 53½ inches. Hubs: 6½ by 3⅛. Front band: 2¼; back: 2½. Spokes: ½ inch by 11-16ths. Depth of rim: ⅞. Tire: ¾, No. 12 steel. Axle: ¾ steel, 6½ arm. Wheels: 3 feet 11 and 4 feet 1. Track; 4 feet 4.

The half of top view shows a single perch. We would prefer the double perches. They are being built either style to suit the purchaser. The head bar to which the spars are clipped are 1 5-16ths by 1¼ in centre, ¾ by 1-16ths at ends. The toe bar is 1 inch square in the centre, ¾ at the ends. Perches: not plated; front bed arched 1 inch; back, 1⅜.

MONITOR PIANO BUGGY.

PLATE 24—A unique design, furnished by Mr. T. G. Hendry, of Newark, N. J. Mr. H. will accept our thanks for the interest he takes in the success of the JOURNAL, and we trust our patrons will find in the above design something well worthy of imitation. The style of painting this buggy, as given below, if strictly adhered to, will add much to the appearance when completed.

DIMENSIONS: Width of body, 21 inches on seat for half size, 26 inches for three-quarter, and 30 inches for full size. Concave rocker: 1½ inches thick. Panels lightened on inside, showing top edge scant ¼ inch. Panels of body taken from white wood or poplar, thickness sufficient to form lower beveled edge, with half diamond moulding passing around the body, as shown in the draft. Back of body, open; body to weigh 15 or 16 pounds, when completed by the bodymaker. Weight for half size, if properly constructed, should not exceed 115 pounds.

DIMENSIONS: Hubs: 6 by 3⅛. Back band: 2½; front: 2⅛ Spokes: ¾. Tire: ¾, No. 12 steel. Depth of rim: ⅞. Axles: ¾ steel. Springs: 1¼, 3 plates, 36 long, 9 open. Wheels: 4 feet, and 4 feet 4. Track: 4 feet 8.

TRIMMING: Corduroy, patent leather welt.

PAINTING: Body: seat and space below the moulding, green, (Malori green, glazed with verdigris or Emerald green.) Panels: carmine; seat riser and concave rocker, black. Mouldings: striped gold. Carriage: carmine, striped black and gold. Bands: opened rimmed, gold plated on inside and front edge, plated face plate, nuts capped.

Correspondence.

☞ We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.

For the Coach-Makers' International Journal.

MACHINERY.

BY J. H. T.

It is doubtful if this age differs from all the other ages in any one particular so much as in being the age of machinery. In the past civilization, much as they accomplished, excelling us in many particulars, machinery did not come into general use, or it was of the simplest character. At the highest point of Egyptian civilization wheat was ground by women in a hand-mill made of two stones; or, at the best, by larger stones turned by oxen. The fine linen of Egypt was spun from a hand distaff, and wove in looms of the simplest description. Thousands of men were employed in works which would now be done almost entirely by machinery. Now, machinery does a large proportion of all our work, and is every day coming into wider use. Machines make almost everything, and machines make machines. If we travel, the steam engine propels us. Our food is prepared by complex machinery. Our clothing is spun, woven and sewed by machines. Machines knit our stockings and under garments, and do the largest part of the work in making our shoes; they also do the same for our head covering. The pin that fastens our garments, they are even stuck in the paper rolls by machinery, besides being headed, pointed and polished. The hook and eye are made from the reel of wire by a machine which seems to possess human intelligence.

Unless the reader is very considerate he scarcely knows how much he is indebted to machinery. This paper on which he sees such beautiful type prints has come through a long series of machinery. It has passed through the cotton gin, a very simple but most important invention—few have done more for modern civilization. It has been squeezed in the cotton press. It has been carded, spun, woven, worn to rags, then washed, picked to pieces, bleached, ground to pulp, squeezed through rollers, and finally come out an endless sheet of paper perfectly white. The linen and hempen portions have passed through their peculiar processes. Then come type-making machines, and printing machines, and with some brain labor, which cannot yet be done by machinery. So the readers of the JOURNAL may rejoice that they get so much useful information for so small an outlay, as it has come to them through machinery.

For the Coach-Makers' International Journal.

CHRONICLES.

BY GENIUS, THE SCRIBE.

CHAPTER 2.—THE FRIENDS OF ISAAC.

And these are the names of the friends of Isaac, who did live in all the cities of the land of Unkle Psalm.

There was MYRON from the land of gold, which is towards the setting sun, beyond *Utah*, the land of *Young Saints*, and nigh unto the *Celestial Empire*.

And from one *Ward* in Spain, there came the names of a great many friends, and they did dwell in *Rah-way*.

And there was a man in *Brook-lin*, and his name was *Cast-a-line*; and he did "*bate*" Burke in *fishing* for names.

And there was a *Reed* in Oo, and it was his wish *To-lead*-(o,) and he did try, and did succeed.

And there were some names from the *Ryelands* of Bridgeport, which are near Gotham.

And there were *three* in New-Haven, and they did do well, for they *Tuck*-(h)-*er* by storm.

And one there was in *Low-L*, and *he* did send some names, and that was (W) *right*.

And there was *A Sailor* from the land of *die*-vorce, which is *Ill*-linois, and he dwelt in the town of Moline.

And a man in the "Hub" and he is *White*, and one in *Troy*, and he is *Brown*.

And there were two great *Walkers*, and they were from the North, one from *Kings-ton*, and the other from *Ames-bury*, and the latter made it his *aim* to get names, and *he* did succeed.

And there was *Nick's-son*, and he dwelt in the city of *Louis*, the *Saint*, which lieth on the river of the Mis-sis-sippi.

And there was a *Cretor* from *Leavenworth*, and he did send the names of other *Creeturs*.

Now, the friends of Isaac were several thousand, and they were scattered broad-cast all over the land of Unkle Psalm, in all the towns thereof.

So Ezra, marvelled much over the things that I have told ye; and he did say unto his followers, Can such things be?

And they did make answer and say. Yea, verily, Why follow ye not in the footsteps of Isaac?

And Ezra did consider the words of his friends, and did say, yea, even so, I will follow after Isaac.

For did I not do the same unto Sala-Dee, and I did profit thereby. Therefore, even now will I try.

And *he did* follow after the book of Isaac, yea very closely, and he did forget that the Book of Isaac was *copy-righted*, and he did copy therefrom.

And among *other things* he took a fine Chariot, the name of which was "Caffrey," though Ezra called it not by that name.

And it was like nothing Ezra had ever had, neither like his *Dog-Carts*, nor his *Chariots* of Assyria, Persia or Egypt.

Neither was it like his *Original Monograms*, which it would be no sin to worship, as they were like nothing in the heavens above, the earth beneath, nor in the waters under the earth.

Now, Ezra did not call the chariot by its name "Caffrey;" neither did he thank Isaac for it, for he did want the people to think it was "*Designed expressly for his book*.

And Ezra's failing eye-sight grew upon him, in so much that he was unable to trace *Egyptian Chariots* upon his slabs of *Coal*.

Therefore, did he not cast them aside, and has them no more in his book. Therefore, I say unto ye all, whether ye be old in years, or in the spring time of life, shed ye tears of — joy.

For the Coach-Makers' International Journal.

DISAPPOINTMENT.

From the cradle to the grave we are the subjects of disappointment. The infant, whose little life is measured only by weeks, gives a boisterous demonstration of its disappointment on discovering that its mother has stealthily slipped away from its side, leaving it all alone. The little child, ever seeking new sources of pleasure, is delighted as it skips along through the garden from flower to flower, attracted by the beautiful colors presented by nature. The gaudy wings of the butterfly, as they flash in the sunlight, arrests its attention, and in childish glee and thoughtlessness it pursues the beautiful creature, confident of capturing it. But when the coveted prize has flown beyond its reach, the child manifests its disappointment by pitiful cries.

The young man, just starting in life with high hopes of success, may find his best plans frustrated by unforseen events. Disappointed and cast down he mourns over his misfortunes, and too often vows he will cease all efforts to re-establish himself.

"The soldier," seeking the bubble reputation even in the cannon's mouth," may be outgeneraled at the moment when victory appeared ready to perch on his banner. Disappointment, sorrow and shame crush him, as it were, to earth, causing intense agony of mind.

The politician, whose name is before a free people as a candidate for an office of honor and trust, reads with sorrow the election returns, as they are flashed across the wires, soon after the *people* have spoken by the ballot in favor of his opponent.

Thus it is through all the intricate net-work of human concerns. Coveted prizes are snatched away, and buoyant hopes sunk in disappointment.

I have not escaped, for I was sadly, sadly disappointed a short time ago, and cannot be comforted. My friends have endeavored to console me, but while I acknowledge their kindness, I find no relief.

I would not thus give publicity to my anguish were it not that others may be similarly affected, and suggest a balm for my lacerated feelings. Dear friends, dejected and forlorn, I have not strength sufficient to mention more than the cause of my troubles. Listen! I have for ten years been a constant reader of the "*Magazine*," and acquired a decided taste for the *antique*.

My attic will testify to the truth of what I state. In that upper half-story may be seen my great-grandfather's *old boots, his pipe* and *greasy wallet, which still bear his finger prints. An old wheel-barrow, part of a plow, a piece of pumice stone from Pompeii, and a tuft of cotton*, snatched as a trophy from a cotton bale, at the battle of New Orleans, by one of my ancestors.

The walls are decorated with cuts of *Egyptian, Assyrian and Persian chariots, carts and processions*, clipped from a monthly publication, which I depended on to complete my gallery. But alas, I am doomed to disappointment, for the February number came to me without a picture suited to my upper room. My son had promised to add to the collection after my death, and teach *his* children to do likewise, for I had not the remotest idea that we should ever be deprived of this monthly addition to the collection. If you have any consolation for me, direct immediately to

MUMMY.

☞ All who are in want of Velocipede Wheels, should buy them of S. N. BROWN & Co., DAYTON, OHIO. *Don't forget* to read their advertisement, so beautifully displayed, on highly colored paper, in the front of the JOURNAL.

For the Coach-Makers' International Journal.

THREADS FROM THE MEMORY OF AN OLD CUSHION.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER IV.

Fred's old cushion to the war has gone,
In a soger's tent you find it,
For it was blown up on a stern-wheel boat,
And left one button behind it.
—*Not the "Minstrel Boy" of Moore.*

We had now been at the Magnolia plantation about four months, and everything, as far as home and family was concerned, went along very smoothly and pleasant. Our young lady was happy in her husband's love, and nothing occurred to mar her happiness, not a cloud darkened the sunny life she led. While Col. Cayton was as loving and gentle as it was possible a man could be, there was evidently a very serious future before us all, and the thought of it troubled him much and continually. Still, I do not think he ever gave his mind, on the subject, to his wife, at least I judged so from her unclouded brow and happy manner of life she led. But it must come soon I knew, for the Colonel was getting more gloomy as the certainty of a civil war was made every day more certain. At length the storm reached its height, *and war was in the land.* Yes! dreadful civil war! War in all its horrors; war of brother against brother, and the great republic, which heretofore seemed as imperishable as "time itself," was divided *for a while.* The Colonel kept aloof from the strife, but the pressure of friends and of public opinion at last forced him to assume a position he did not wish to assume. His influence was great in this section, and he was to be commissioned to raise a regiment for active service against the Union.

When matters had gone this far he must inform his wife, and although he did so in the gentlest manner possible, the shock to her was a rude and severe one; she appeared to have tumbled down from the highest pinnacle of human happiness to the lowest depths of despair. She always was one of those extreme people who never know a middle course in anything, and are consequently either very happy or very wretched. The result was a severe indisposition which confined her to the house for a month. At the end of that time the Colonel had succeeded in organizing nearly his full regiment, and had made arrangements for his wife to leave the plantation for her former home, which arrangement was reluctantly acceded to by her. At first she insisted on remaining to take care of the place, but he was more far-seeing and explained to her the impracticability of this plan, that the war would eventually spread even to this section, that the negroes would be disorganized as workers, and would probably be called to help the North, and help to fight for their freedom; that a delicate woman alone in such a locality and unused to the country would be wretched; that she would hear from him as well in her own home, perhaps better, than at Magnolia, and then she would be with her nearest and best friends, aside from him. Her consent was at last won, and preparations were accordingly made for our departure under Tim Dunigan's care. Ah! well, Mr. Fred. Pumice, I will never forget that parting between the colonel and his wife. It is a long time ago now, long for a cushion, yet 'tis as fresh in my memory as if it only happened yesterday. How she cried and how he tried to force back the tears, and they would not be forced back; how he promised to write often, by every opportunity; how she prayed him to give up the idea of going, which he said he could not, and how they promised to meet and be happy again after the strife was ended.

At length he had to lead, or rather carry her to the boat, amid the crying and prayers of the assembled negroes, who were now assembled to give a good-bye to their best friend. Not one of those negroes but who looked upon her as almost an angel in human shape. Were one of them sick, or in trouble, she was always ready to assist them, and when the last good-bye was said, the scene was truly affecting. Our young lady had to be carried to her state room in a fainting condition. The Colonel kissed her, and tore himself away from his young wife; he never saw her more.

Never again did they meet; never again *will* they meet, until the last grand awakening comes. A fearful future was before them both, and I, Mr. Fred. had my share of the trouble. Of course, the "grey," and our buggy went too; and it was arranged for us to go on down to New Orleans; this course was now necessary, because the river trade was completely upset, and very few, if any, of the large boats which run to the upper Mississippi were now in use, for the Secessionists were already in possession of several importants points on the river, and had begun to interfere with the free navigation of the river; so we were to go down, so as to be on hand for any boat which *may* go up.

TO BE CONTINUED.

For the Coach-Makers' International Journal.

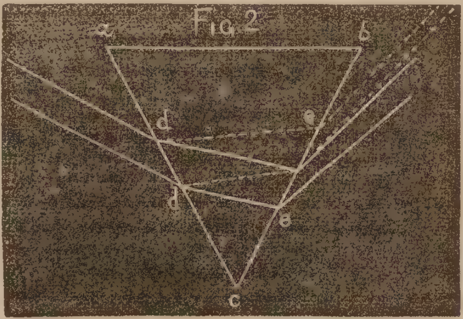
COLOR.

BY J. H. T.

Continued from page 70.

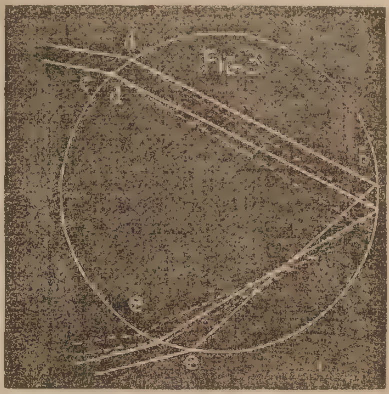
1st. The rays of the sun, transmitted through a triangular prism, exhibit an image of various colors (the chief of which are red, yellow, green, blue and violet,) on the opposite wall.

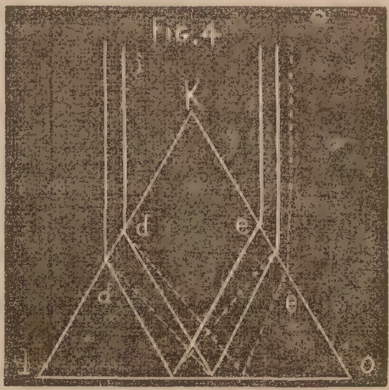
The reason is, that the differently colored rays are separated by refraction; for the blue rays, for instance, marked with the dotted lines, (*see figure* 2,) which begin to be separated from the rest by the first refraction, in *d d*, of the side *c a*, of the prism *a b c*, (as also in the first surface of a globe of water, *a b c*, *figure* 3,) are still further separated in the other side of the prism *b c*, (as also in their egress out of the globe *e b c*,) by a second refraction in *c e*, in the same direction as the former; whereas, on the contrary, in the plane glass *a b c f*. *figure* 5, (as also in the prism *k l o*, *figure* 4, now placed in another situation,) those blue rays which begin to be separated from the rest in the first surface in *d d*, by a second refraction, the contrary way, pass out parallel, *i. e.*, remixed with all the other rays of the other colors.

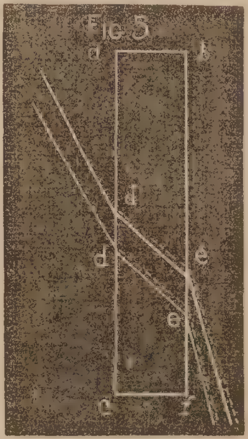


2d. That image is not round, but oblong; its length, when the prism is an angle of sixty or sixty-five degrees, being five times its breadth. The reason is, that some of the rays are refracted more than others, and by that means exhibit several images of the sun, extended lengthwise, instead of one.

3d. Those rays which exhibit yellow are turned further from the rectilinear course than those which exhibit red; those which exhibit green, than those which exhibit yellow; but, of all others, those which exhibit violet, the most. Accordingly, if the prism, through which the light is transmitted, be turned about its axis, so as the red, yellow, green, &c., rays be projected in order, through a narrow aperture into another prism, placed at a distance of about twelve feet, the yellow, green, &c., rays, though falling through the same aperture in the same manner, and on the same point in the second prism, will not be refracted to the same place as the red, but to a point at some distance from it, on that side to which the rotation is made. This is what Sir Isaac Newton calls the experimentum crucis; being that which led him out of the difficulties into which the first phenomenon, &c., had thrown him, and plainly showed him different degrees of refrangibility, and a different color corresponding thereto in the rays of light; and that yellow rays, for instance, are more refracted than red ones, green ones more than yellow ones, and blue and violet ones most of all.







4th. The color of colored rays, well separated by the prism, are not at all changed or destroyed by passing an illuminated medium, nor by their mutual decussation, their bordering on a deep shadow, nor their being reflected from any natural body, or refracted through any one, in a place howsoever obscure. The reason is, that colors are not modifications arising from refraction or reflection, but immutable properties, and such as belong to the nature of rays.

5th. An assemblage of all the kinds of colored rays, collected either by several prisms, by a convex lens or a concave mirror, or in any other manner, from what we call whiteness; yet each of these after decussation becoming separated again, exhibits its natural or proper color; for, as the ray was white before its parts were separated by refraction, so the parts being remixed, it becomes white again, and colored rays when they meet together do not destroy one another, but are only interspersed. Hence, a red, green, yellow, blue and violet color being mixed in a certain proportion, appear whitish, *i. e.*, are of such a color as arises from black and white mixed together, and, if there were not some rays lost and absorbed, would be plainly white. In like manner, if a paper be cut in a circle, be stained with each of those colors separately, and in a certain proportion, then swiftly turned round its centre, so that the species of colors be mixed together in the eye; by the briskness of the motion the several colors will disappear, and the whole paper be of one continued color, which will be a mean between white and black.

6th. If the rays of the sun fall very obliquely on the inner suface of a prism, those that are reflected will be of a violet color, those that are transmitted red. For the rays were colored before any separation; and, by how much more they are refrangible, by so much they are the more easily reflected, and by that means are separated.

7th. If two hollow prisms, the one being filled with a blue fluid, and the other with a red one, be joined together, they will be opaque, though both being apart, will be transparent. For, the one transmitting none but blue rays, and the other none but red ones, the two together will transmit none at all.

8th. All natural bodies, especially white ones, viewed through a prism held to the eye, appear fimbriated, or bordered on one side red and yellow, and on the other with blue and violet. For those fimbriæ are the extremes of entire images, which the rays of any kind, as they are more or less refracted, would exhibit nearer or at a greater distance from the real place of the object.

9th. If two prisms be so placed, as that the red of one, and the purple of the other meet together, in a paper fit for the purpose, encompassed with darkness, the image will appear pale, and, if viewed through a third prism held to the eye at a proper distance, it will appear double, the one red and the other purple. In like manner, if two powders, the one perfectly red, and the blue, red and purple mixed, any little body covered pretty deeply with this mixture, and viewed through a prism held to the eye, will exhibit a double image, the one red and the other blue; because the red and purple or blue rays are separated by their unequal refraction.

10th. If the rays transmitted through a convex lens be received on a paper before they meet in a focus, the confines or boundary of light and shadow, will appear tinged with a red color; but, if they are received beyond the focus, a blue one; because, in the first place, the red rays being something more refracted, are the higher: but in the second after decussation in the focus, the blue ones.

Lastly, if the rays about to pass through either side of the pupil, be intercepted by the interposition of any opaque body near the eye, the extremes of bodies placed as if viewed through a prism, will appear as if tinged with colors, though those not very vivid. For then the rays transmitted through the rest of the pupil will be separated by refraction into colors, without being diluted with the admixture of the intercepted rays, which would be refracted in a different manner; and hence it is, that a body, viewed through a paper pierced with two holes, appears double and also tinged with colors.

[TO BE CONTINUED.]

Pencil, Rule & Square.

D. BOARD, EDITOR.

FRENCH OR SQUARE RULE.

PART THIRD.

BY A PRACTICAL CARRIAGE ARCHITECT.

(See illustration in the front of JOURNAL.)

You will perceive in this diagram we have left out the belt or arm rails, and all other lines that are not needed for present consideration. We shall take up each piece separately, after being dressed, that is necessary to be pricked off, as this is the most difficult part for the beginner to understand. S S are the cheat lines to be used for pricking off the bottom sides. Underneath the draft board, we have, for convenience, placed the two bottom sides, represented by the white space, with the bottom edge up, line F being their face, as laid together. These, you will perceive, are pricked off from the prick marks on the cant, which we proceed to explain the manner of doing.

You will notice, in the turn-under of the standing pillar, an outside line, which is the thickness of the moulding to be left on the bottom side. You will take your dividers, place one point on perpendicular line C, where it intersects with the parallel line No. 1, the other point place on the line of the turn-under of the standing pillar. Having this space, with your dividers you transfer it to the cant, place one point on the cheat line S, where it intersects with the perpendicular line No. 1. You prick off this space from the cheat line S towards line D. From this prick, to line D, the face of the bottom side, is the thickness of the bottom side at the foot of the front pillar.

You will proceed in this same manner with the lines Nos. 2, 3 and all the horizontal lines until you reach the base line A, which will be the centre of the door. From this point, on the back part of the bottom side as it sweeps up, you will raise on the horizontal lines, bearing in mind, where the horizontal and perpendicular lines intersect on the bottom edge of the bottom side, to have the turn-under deducted from line S on the cant, on the perpendicular lines at the intersecting points, as represented in the diagram.

With your dividers, you transfer the thickness, at the different points, to the bottom sides, as shown under the draft, commencing with the perpendicular line No. 1, from line D, being the face of the bottom side on the cant, the other point on the prick. Transfer this distance on the same line No. 1, one point of the dividers on the face line F; the other point you prick off, as shown in this diagram, and so on, transfering all the distances from the cant to the bottom sides, the full length.

Having the bottom sides now pricked off, on the lower edge, you turn them over, and on the top side proceed in the same manner, taking the dotted lines where they intersect the perpendicular lines, top edge of the bottom sides, and deduct the turn-under on the cant from line S, and transfer the remainder of the space to line D, on to the bottom side. Now you sweep the bottom sides to these prick points, which gives both the sweep and bevel.

Side Elevation and Cant, Back View—Front and Back Bow, Storm Cover Bow, Concealed Hinge, for Front Inside Seat Lid.

PART SEVENTH.

(See illustration in front of Journal.)

The present diagram represents the side elevation and cant of the Clarendon Brett, as shown on plate No. 22.

You will perceive we have laid out the cant below the side elevation, for the purpose of its being clearly understood; for ourselves, we would prefer the cant drawn over the side elevation, having the bottom edge of our draft board for the centre line.

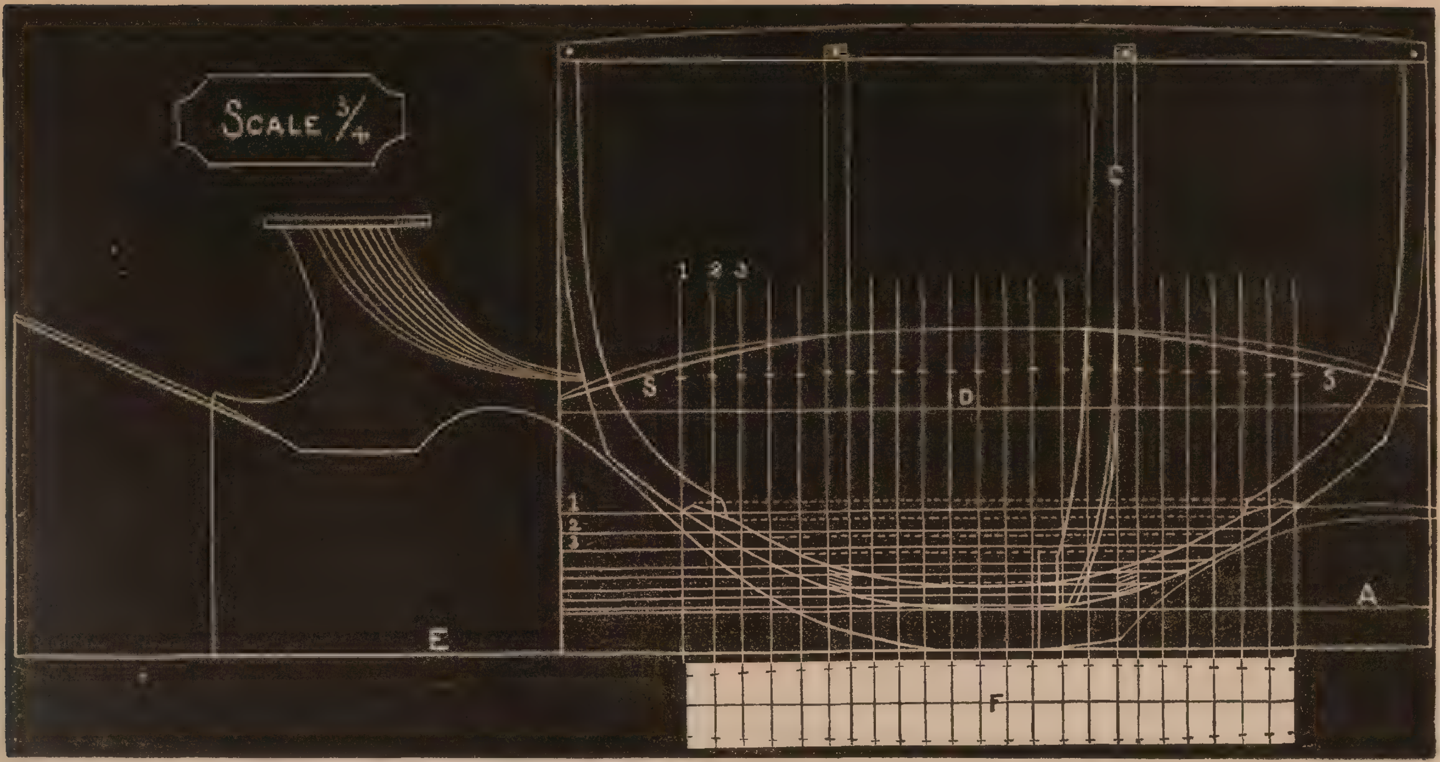
The side elevation being artistically drawn, you will determine the turn-under, which is three inches and a half, and also establish the depth of the pillar, and line G, being the face of the bottom side; this allows the doors to shut against the rocker. Complete the patterns. Proceed and draw perpendicular lines A and B, the extreme length of the body, and also lines H and I; then draw the horizontal centre line.

Now we lay out for the width of the body, which is 3 feet 11½ inches on line I. You can proceed and measure from centre line on line I 23¾ inches, (this being half the width of the body,) and prick it off; this is one point of the establishment of line C. You then measure off on line H 22¾ inches, being another point for the establishment of line C. This contracts the body two inches in the width of the door.

Take your dividers, place one point on line H, the other on line G; having this space, prick it off on lines H and I from the points last mentioned, which establishes line D. From these two points, lay your straight edge and draw line D. Measure 1¾ inches from line D, and draw line K, which is the thickness of the rocker.

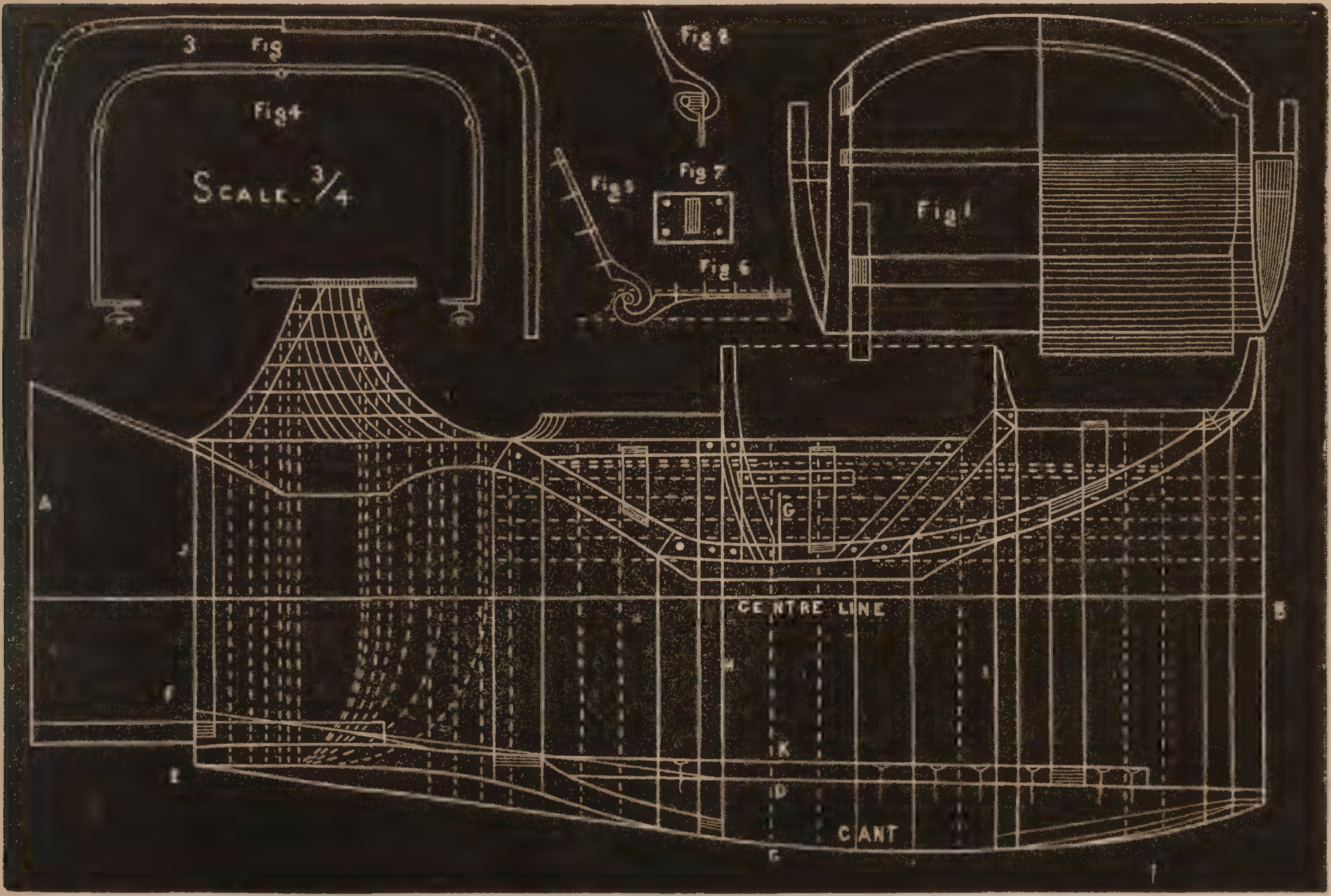
You will see by the diagram we have laid out the framing of the back pillar at the arm rail, and also the framing of the back bar in the rocker, the same passing back sufficient to take two screws, making a much more durable job. Measure 1¾ inches from line D on line B, and prick it off. Now proceed and lay out the width of boot, which is 30 inches; measure from the centre line, on line J, 15 inches, being half the width of boot.

You can draw line G from the different points established as represented by the diagram. The belt or arm rail as before explained. The space between the two lines E and F represents the thickness of stuff required to form the concave



Coach Drafting: The French or Square Rule.

Three-quarter inch Scale. Explanation on page 88.



Side Elevation and Cant—Back View—Front and Back Bow—Storm-cover Bow—Concealed Hinge, for Front Inside Seat Lid.

Explained on page 88.

boot, F line being the face, laid on the draft for pricking off.

In forming the round boot, use 2-inch white-wood or poplar, one glued over the other, until the desired height is obtained. When cleaned off, cover with raw hide.

Fig. 1 represents the back view, half paneled, and half framed.

Fig 2, half the front bow, the manner of framing. The two front bows should be the same width; the third, one inch narrow at the top, and so on, until the fifth bow is reached, which is Fig. 3, the back bow, which is the same width at the bottom, but three inches narrow at the top. This contracts the bows with the sweep of the body.

Fig. 4 represents the storm-cover bow. This is made from half inch round iron; use stump joints at the three different points for folding. This is secured to the back of the dicky seat with thumb nuts.

Fig. 5 represents the concealed hinge, with the crank up.

Fig. 6, with it down.

Fig. 7, front view of the socket.

Fig. 8, side view, socket and crank attached.

In the construction of these hinges, there should be a wood model first made, for it is necessary they should be exact, to work well, so as to prevent alteration afterwards. The sockets can be cast of brass, the crank from the best wrough iron.

To D. Rutenbur, Palmyra, Wis.

In answer to the inquirer, for the proper method of sweeping the bottom side, there are different modes of accomplishing it; the coach, as illustrated with the French Rule, the bottom sides are swept to a circle of 7 feet 6. The sweeps of bottom sides vary, and modes of producing them; the eye being your guide. It will be fully explained in our system of scale drafting.

The Journal being now the only reliable and acknowledged the best publication, devoted to our art, in this country, we feel like exerting ourselves to make it abound with practical and highly useful knowledge. We are now preparing for publication, a series of scale drafting, from a pencil sketch, to the use of the India ink, and then to a fine French colored draft.

Wheel-Horse and Mallet.

SPOKE SHAVE, EDITOR.

Having got my spokes in the hub, I shall, in the present article, try and explain, as best I can, how to rim the same correctly. In cutting the finger tenon, we must be careful to get them on a straight line with the face of the wheel; to do this we lay the face of the *hub* on a bench, which is perfectly straight and true; we will then measure the extreme points of the two front spokes from the bench, that is to say, the two spokes immediately opposite each other.

The size of the tenon depends upon the tread and body of the spoke. If the tread is ⅞, and the body of spoke ¾, you will make your tenon ½ an inch; if your tread is ¾, you will cut your tenon about 7-16 of an inch. This will give a good supporting shoulder, which is so essential to the wheel, as you will discover when we get to wedging up the rim. You will also observe that this size tenon will give more strength in your rim.

Having our tenon cut, in the preparation and boring on the rim, we take our *felloe*; if it should be winding, which is invariably the case, to some extent, we true them up as best we can; we then mark off for boring; face them off perfectly true; and gauge off, so as to bring our tenon, when dressed off, in the centre of tread; if we have no machine for boring, we gauge off on both sides, and bore accordingly. After boring, we drive on the *felloe*, but before driving it on with a chisel, take off the inner edge of the hole, so as to let our shoulder in, or wedge without throwing the strain on shoulder of spoke, immediately around the tenon. This will prevent your shoulder from chafing; we then drive our rim on, cut out what joint we want, but here you must be governed by the quality of your timber, as some felloes will wedge up more than others. When we have got our joint out, we then take a straight edge and see how our spokes are, and if there are any crooked, we mark them on the rounding side, that we may know how much crook there is in each spoke; we must know what our marks mean; when this is done, we take off our felloes, round them up; when rounded up, we go back and examine our marks; we then shave off the tenon on the rounding, or the side our mark is on.

If our mark indicates the spoke to spring a great deal, say ⅛ or 1-16, we must exercise our judgment how much we must take off; we must here bear in mind our quality of spoke, if we wish to be correct in our judgment; in shaving off, we must not take it off all the way up to the shoulder, but commence according to the amount to be taken off; when we have completed this, we then drive our felloe on again; next take the wedging chisel and drive it in on the hollow or opposite side of our mark, leaving the heft of tenon on the side of mark; we then insert our wedge; now force the rim up by hammering from the hollow, or opposite our mark on spoke; this will bring the spoke straight, provided we do not take too much off of it. If we should take off too much, we can remedy this by hammering on the rim where the mark is.

In wedging up, we must settle the shoulder up square on the rim; this prevents the spoke from chawing off at the shoulder; it gives permanency to the wheel. Having our wheel wedged up, we then dress off the same. The tread is the next point of interest; this we must be careful about; we take a plane, and dress the tread off by a square, that is, when the square is laid level on the tread, it strikes the face of rim on the opposite side; this is done for the reason that, when the tire comes on, it will draw the wheel the same all around, leaving the wheel as it was when we was preparing to cut our finger tenons.

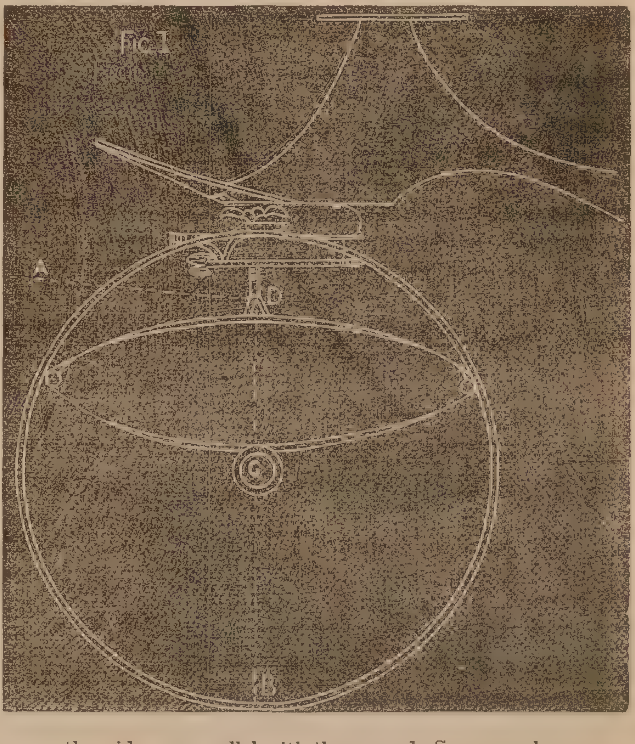
Having got to the tire, we shall, in our next, have a brotherly confab with V. Ulcan.

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

THE HEIGHT OF WHEELS AND LINE OF DRAUGHT.

The greatest power of draught is obtained by a horizontal, or a line in the same height with the breast of the horse; said line operating in a square angle of the diameter of the wheel. The height of the wheel depends, consequently, on the height of the line of draught.



It would require a seven foot wheel to bring the line of draught in a corresponding height, or parallel with the ground. Suppose a horse measuring 3½ feet to the proper elevation, were to start the traces, then we should calculate how high, possibly, we could raise our splinter bar, shaft or pole, to fetch the line of draught as near horizontal as possible; if a platform spring carriage, the height of spring and headblock would give us 3 feet to the point A, Fig. 1, where, as a rule, the line of draught, A D, should be placed. The proportion between front and hind wheel is generally 3½ to 4. The action of draught causes the axle arm to press against the face of the box, and compels the wheel to turn; the lower or supporting spoke B, Fig. 1, acts as a simple lever, resting on the ground and acting at C in the centre of the wheel.

The higher a wheel and smaller the axle arm, the less the power required to turn a carriage. A wrong proportion in the hanging of a body above the axle hastens the wear of the carriage. If we should, as many do, suppose that the nearer the load is to the wheel the lighter the bearing. A body on platform springs, at a rapid motion, will swing forward, causing more or less vehement shocks, which in heavy built bodies tend to suffer the front spring to lean over and would soon wear the gearing down. Therefore, the centre C, Fig. 1, of the wheel should be placed in as near a perpendicular line with the extremity of the boot, as the fastening bolt through the rocker at E allows, leaving the king bolt 4½ inches forward of the axle.

Bodies on C springs have a still greater forward swing, especially on plastered roads, and are balanced, as a weight, by the length of the loops and spring straps; the front C springs to contain one extra leaf for steadying the body. Two wheeled carts, dennies, &c., have the body, fully loaded, hung balancing over the axle.

In proper time, we will give designs for a sliding gearing, which can be screwed backward and forward so as to balance either two or four passengers. We shall, also, begin in our next to explain and draft a variety of carriage parts, from a simple buggy to a most complicated coach running part, and have, for the present, selected a pattern for a shifting "seat rail," in order to please some reader anxious for having questions answered and to divert our thoughts from a lengthy theoretic reasoning.

SHIFTING SEAT RAIL, (All Iron.)

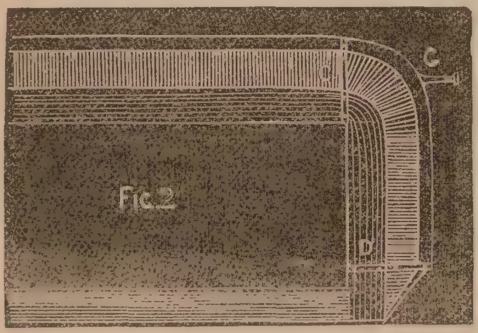
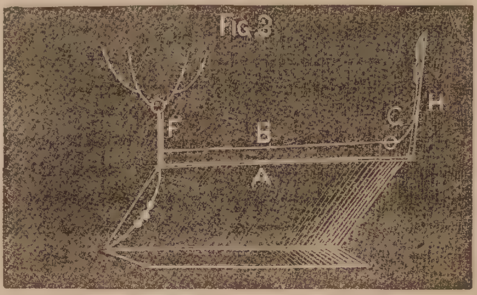


Fig. 2.—*Top View.*—This is easily understood, bearing in mind that the lower and upper rails, A and B, Fig. 3, cover or correspond. Take the two slabs, C and D, ⅞ and ½-inch, and fit them exactly to the inside of the seat, then weld them to the seat rail and drill a hole in the middle between top of seat and rail to receive the thumb bolt to screw the top rail down. The top rail covers the seat rail, and is made of oval iron 9-16ths by ¼-inch, welded to the pivot E, then to the prop G scant ⅝-inch square, having the lateral part where it joins the rail, widening to give it firmness. Bend the ends of pivot E and lazy back H square to cover the slats C and D, and have a thread cut in to receive the four thumb bolts. From the prop G runs a short stay up to the lazy back to strengthen it. Knobs are riveted to the rail to hold the squabs and back curtain.



Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

The Principles of Coloring in Painting.

CONCLUDED.

The effect of placing gray upon a yellow ground, according to its contrast, the pattern will appear of a lilac or a violet color. The painter wishing to imitate this object can reproduce it faithfully with gray. The painter who is ignorant of the law of contrast of colors, and the reciprocal influence of one color upon another when placed near each other, would attempt to imitate the colors as presented to the eye; blue and red, for instance, if placed near each other, would appear different in color to the eye than what they really are. The sight of red would call up its complimentary green, which, being added to the blue, would tinge it. If, in imitating the pattern, the painter should add green to his blue, he would have an exaggerated pattern. Or, should he add orange, the complimentary of blue, to his red, a like result would follow.

When a color is put on a canvas, it not only colors that part of the canvas to which the pencil has been applied, but it also colors the surrounding space with the complimentary of that color.

Thus, a red circle appears to be surrounded with a green aureola. A green circle, with circular rays of red. An orange circle is surrounded with blue. A blue circle with orange. A yellow circle is surrounded with violet. A violet circle with a yellow aureola.

To place white beside a color is to heighten its tone. Put black beside a color it weakens its tone. Gray placed beside a color renders it more brilliant, and the gray is tinted by the complimentary of the color.

Hence, if the painter wishes to imitate this gray, which appears tinted with the complimentary of the pure color, need not use a colored gray.

To put a dark color near a different, but lighter color, will heighten the tone of the first, and lower that of the second.

A light blue placed beside a yellow tinges it orange, and, consequently, heightens its tone. While the darker shades of blue would weaken it, not only hiding the orange tint, but to very sensitive eyes appear of a greenish hue.

The Greek painters, whose palette was composed of white, black, red, yellow and blue, executed some very fine pictures.

It has been remarked that it was probably the method of Titian to paint with one color, such as umber and white, and when the chiaroscuro, or light and shading, was complete, he glazed over it the color of each object.

The instructions we have given under the heading of The Principles of Coloring in Painting, if properly understood, will be found of incalculable value to the painter.

We will conclude these instructions by giving a list of the colors in general use, which may be purchased of any respectable color house. We intend, hereafter, to devote a certain amount of space to other matters pertaining to painting, which, we trust, will be equally interesting and valuable.

OIL COLORS IN PATENT COLLAPSIBLE TUBES.

Whites.—Flake white, Nottingham white, blanc d'argent, permanent white.

Blues.—Antwerp blue, indigo, Prussian blue, permanent blue.

Yellows.—Brown ochre, chrome yellow, chrome deep, chrome orange, Italian pink, king's yellow, Naples yellow, light, Naples yellow, deep, orpiment, patent yellow, Roman ochre, raw sienna, transparent gold ochre, yellow lake, yellow ochre.

Browns.—Asphaltum, bone brown, burnt umber, brown pink, cappath brown, Cologne earth, mummy, raw umber, Verona brown, Vandyke brown.

Greens.—Emerald green, olive lake, terre verte, chrome green, verdigris.

Reds.—Burnt sienna, burnt Roman ochre, crimson lake, Indian red, Indian lake, light red, scarlet lake, Venetian red, Chinese vermilion.

Blacks.—Blue black, black lead, ivory black, lamp black.

Mediums.—Megilp, sugar of lead.

Extra Colors.—Burnt lake, vermilion, cobalt, French ultramarine, Indian yellow, rose madder, pink madder, Rubens madder, brown madder, Mars brown, Mars violet, Mars scarlet, Mars yellow, Mars orange, oxide of chromium, malachite green, mineral gray, lemon yellow, cadmium yellow, orange vermilion, ultramarine ash; carmine, burnt carmine, purple madder.

BUFFALO, Putnam Co., W. Va.

MR. EDITOR.—I wish you would give full instruction in the next number for painting light buggies, how each coat is mixed from the priming to the finishing coat of varnish. Please give instructions how to rub down, how long ought the job be in painting, and what varnish is best, &c. By so doing you will much oblige,

A SUBSCRIBER.

ANSWER.—*The Body.*—Prime the body with "Piotrowski's Permanent Wood Filling," which is far better than lead, being impervious to water. It requires no mixing, is put up in cans ready for use, and saves a great deal of time and labor. In applying the "wood filling," use a short stiff brush, working the mixture well into the grain and pores of the wood.

Coat the body inside also, as the "filling" will prevent, in a great measure, the shrinking and swelling of the panels, while undergoing the process of rubbing down the rough stuff.

Let the body stand three days. Then sandpaper it down, and give it the second coat of "filling" being careful to drive it thinly, working it well out of the corners, and along the mouldings. When dry, dust off and lay on a coat of rough stuff, made slightly elastic with oil and varnish. It will not be necessary to mix this coat, to dry, with any more glass than is barely sufficient to prevent its cracking over the "filling."

Rough Stuff—The "English filling" is considered the best for the rough coatings, and is used by the majority of manufacturers. It dries very firmly and rubs well, leaving a hard smooth surface. Some painters add to it a small quantity of keg lead in order to give it more tenacity. But for hurried work the lead may be dispensed with.

Puttying.—Putty the body on the first coat of rough stuff. Mix the putty of keg lead and dry lead, adding either red lead or japan as a dryer. Having placed a certain quantity of wet lead on the stone, mix the dry lead into it with a hammer, pounding them together until they adhere firmly, and the mass is rendered tough enough not to stick to the hands. Putty for nail holes should be worked up very firmly by pounding. In puttying nail holes, do not force the putty down to the nail heads or brads, as it is full as well to make allowance for expansion, and also for the swelling of the wood around the putty, causing it, the putty, to *swell.* Deep holes should be puttied twice, allowing at least twenty-four hours time to dry between the first and second puttying.

Let the putty stand two days. Next coat the body with hard drying filling or rough stuff, mixed one-third oil and two-thirds japan. Put on two or three coats, as you may prefer, allowing at least twenty-four hours time between each coating. The body should now be allowed to stand *at least* a week, when the rubbing may be attempted.

Pumice Stone and *English Rubbing Stone* should be used. The English stone cuts faster than pumice, and is not so liable to become clogged up. It is used principally for the first rubbing. The pumice stone following after, which gives a more perfect surface. Select pumice stone that is light and porous; it will cut better, and not leave scratches. Keep it clean by rubbing it on a flat file, or a piece of English rubbing stone.

Commence on the moldings, rubbing the panels afterwards. Where the panels are rubbed out first, the process of rubbing the moldings is apt to cut a groove or channel along the panel, which will show when the body is varnished, if not before.

Do not allow the water to stand inside for any length of time. Sponge it up repeatedly, which will save the joints and corners from injury. When the rubbing is completed, sponge the body off clean, wipe it dry, and let it stand until the following day, when it will be ready for fine sand-papering, and a coat of dark lead. When the lead is dry, hair, or sandpaper it lightly, which will show any defects in the surface, the dents, or holes, appearing darker than the surface disturbed by sandpapering. Now, putty up; mixing the putty of dry white lead and varnish, keeping it in water to prevent drying out. When the putty is dry, face the body down with pumice stone, which will force the lead into the pores of the filling, and level down the putty, giving a perfect surface.

Next, go over the surface with No. 1 sandpaper; clean out the corners with a dull pocket knife, and proceed to coloring. Mix all colors, except the lakes, with one-third oil and two-thirds japan, (the lakes may be ground in varnish or boiled oil,) thinning down with turpentine. Put on one coat a day; hair off each coat to remove grit, &c.

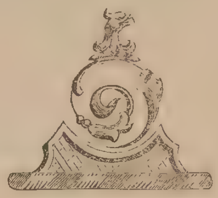
Three coats of clear color, or two coats color and varnish, will cover if properly applied. Three coats of rubbing varnish, and one of finishing, should make a first-class job.

Let each coat of rubbing varnish stand from three to five days before rubbing the body. A *good wearing* varnish will not bear rubbing any sooner. To level down the surface, we use a piece of cork, or pumice stone, beveled on the edges to admit of its being brought up close under the mouldings, and to prevent rubbing them. Place over this two thicknesses of cloth, and with fine even-ground pumice and water cut down the varnish until dirt and brush marks are removed. Rub the first coat of varnish very lightly; the second and third will bear a great deal more if the varnish has been properly laid on. Keep turpentine out of the rubbing varnish, unless it is very heavy and hard to work.

Finish with English Varnish.—Harland & Sons' gives the best satisfaction, and is now preferred to Noble & Hoare's, because it is not so liable to curdle or draw up. We cannot advise as to the best make of rubbing. There is such a diversity of opinion among painters about varnish that one would have to pronounce them all best, for they all have their favorites.

Brushes.—For laying on color, use the flat camel-hair blender, (mottler,) sizes ranging from half-inch up to three inches, and for finishing there is no brush equal to "Thum's" half elastic.

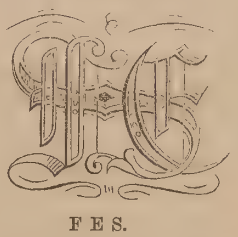
A light Buggy should be in the painter's hands from four to six weeks. For painting of carriage part, see the October number of the Journal, page 11; also, the November number, page 26. Two modes are there given, the new and the old.



This small ornament, although simple in form, will be found somewhat difficult of execution by the novice. It is drawn by the use of the circle and straight lines.

Such patterns will readily disclose to the painter, whether he has mastered the handling of the cutting-up pencil. If in attempting the circular part of the ornament, the nerves become unsteady, and create a lack of confidence, the painter should practice until assured that the hand will obey the will.

Lay in the ornament, gold, shaded with asphaltum, tinted with carmine, and high light with a delicate pink, mixed of flake white and light red. The wreaths may be painted blue and white. Mix three hues of blue, placing the darkest at the bottom, or lower part of each band, represented in the engraving as colored. The white bands should not be laid in with pure white, but tinted with black, forming a delicate gray. The high light which would be seen through the centre of the wreath, represented by dots, using white, tinted with yellow. The space partly covered with diagonal lines, may be left plain, showing only the panel color, or cross barred with a delicate gray, mixed of flake white and black; the tint barely changed by adding light red, carmine or vermilion.

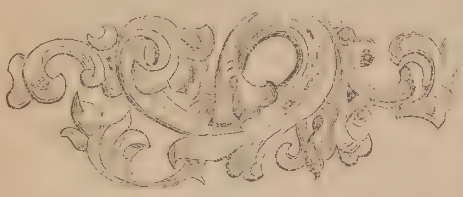


F E S.

MONOGRAM.—Lay in F E with gold, shaded with asphaltum and verdigris, mixed so as to form greenish tints, varying in strength to suit the number of shades required; high light, with straw color, mixed of flake white and chrome yellow, No. 2, put in the dots with carmine, shaded with carmine, darkened with black. The high lights, clear white. Outline S with a dark rich brown, filling in the body of the letter with the same color by use of perpendicular lines, as shown in the engraving. Light with tan color.

Form the diamond shaped centre with clear carmine.

Scroll Pattern.—This will be found excellent practice in the formation of curves. The body of the pattern is of an oval form. The length is about three times the width. The manner of leafing is a matter of taste. The main points to be considered, being variety of forms and curves. It is of the first importance to avoid placing sweeps near each other which are alike.



Lay in with gold, shade with asphaltum, and, when dry, wash over a part of it with verdigris, and a part with carmine, or any other transparent colors you may prefer. Let the gold separate the colors, which will prevent a confused effect. If colors only are used, let the first coatings be subdued in tone, so that the half lights and high lights may show distinctly without forcing upon you the necessity of using clear white, which looks cold, or yellow, which is coarse and unpleasant.

Warm stone drabs, differing in strength, make a very acceptable scroll. As there is such a variety of tastes with reference to coloring, we will not add anything further, leaving the student to select for himself.

Milton, N. H., Feb. 8th, 1869.

Mr. Editor:—Please forward me one of those striping pens, with instructions as to its use, and also inform me what kind of a *size* is used to gild on glass, and have the brilliancy of the gold preserved. I have used isinglass size, but the tack is not sufficient to stick without great care in gilding, and then does not look well. Please answer and oblige A Reader.

The Striping Pen.—In using the striping pen some practice will be necessary in order to gain control of it, and use it with freedom and confidence.

The striping color should be ground out in a small vessel, as it will have to be used somewhat thinner than for ordinary striping. The color may be used with or without oil, but it works more pleasantly with a small quantity in it.

Fill the pen with a camel-hair pencil, wiping off any color that may flow outside with a piece of cloth, which will not give off lint or furz.

When the pen has been set, and the striping color reduced to the proper consistency, so that it runs freely, making the sized stripe desired, do not alter the set screw. If the pen refuses to allow the color to flow out, pass a slip of writing paper, from the inside, through the point of the jaws, which will remove any minute particles of varnish which may have been taken up in its track across the surface. Wipe the point on a piece of silk, soft old chamois, or the hand, to avoid furz or lint.

The pen should be thoroughly cleansed when the job of striping is completed, and laid away in a secure place, where there will be no possibility of anything striking the point. After a few weeks' practice in lining, fine scroll work may be attempted, such as is used in some sections of the country in corners of panels, or on the spring bar and axle beds of gearings, to connect with fine stripes.

Larger scrolls can be formed by outlining with the pen, and filling in the body of the leafing with curved lines of the shape each leaf may require, forming the shades by leaving the ground color clear. With the color properly mixed, and the pen in good order, a hair line may be run on a panel from three to four feet in length without removing it.

Answer to question 2d.—Gilding on glass is entirely out of the line of carriage painting, and we do not purpose to give instructions in a branch which we know but little about. Nevertheless, we will answer to the best of our ability this question, coming as it does from a subscriber. We know of no better size than the Russia isinglass dissolved in water, and used very thin. Outline the letters with black, apply the size quickly, and lay the gold immediately after.

It is the practice with some "sign writers" to merely breathe on the glass, and lay the gold, using no size. The back of the letters are then painted over with asphaltum, to prevent the action of water in cleaning the glass.

Kankakee, Ill., Jan. 10, 1869.

Mr. Editor:—Pardon the liberty I take in asking you the following questions:

Which of the English varnishes would you recommend for general use; and what is the difference in the make of the Noble & Hoare and the Harland varnishes?

Is there an *American* finishing varnish used at Philadelphia or New York which you could recommend? Yours, truly, Painter.

Answer to Question First.—We would recommend the use of the Harland & Son's make of varnish for the generality of work. Not because we believe it to be a superior *wearing* varnish, or that it has a finer lustre: but for its not being so liable to draw up or curdle, after having been laid on. We have used Harland & Son's make, and wish to give it its just dues. It is not so soft a varnish as the Noble & Hoare's, and does not retain its tackiness to the same extent. It is now used by the majority of coach-makers throughout the country, for the simple reason that it dries quicker, and is the occasion of less trouble and expense than the present make of Noble & Hoare. We think it smokes or clouds over sooner than Noble & Hoare's, where a job stands in the wareroom for any length of time, without being exposed to the air and sunlight.

Some shops still use the old make of English varnish, but at the same time admit that it is very troublesome.

Answer to Question Second.—We know of no American make of finishing varnish which is used to any great extent for finishing.

Carriage-makers have fully made up their minds to use *nothing but the English*. Although they may have to re-varnish a great many jobs, they still cling to *the English varnish*. Try it again, they say; the painter may have not laid it on properly—he put it on too heavy, or he put it on too light.

Year after year have coach-makers been fretting and worrying over "the finishing coat." Good painters have been discharged in almost every city and town in the land where a carriage is made—the whole blame of a poorly finished body being laid at their door. Why? Because it was believed by the employer that the *English varnish* was perfection itself. Many a good varnisher, who lost his situation on account of the failure of Noble & Hoare's varnish to "stay where it was put," would find no trouble, or but little, in pleasing that same boss now by using of Harland & Son's.

We are foolish enough to believe that at no distant day the English varnishes will be equaled, if not excelled, by American manufacturers.

Shears, Needle & Tack-Hammer.

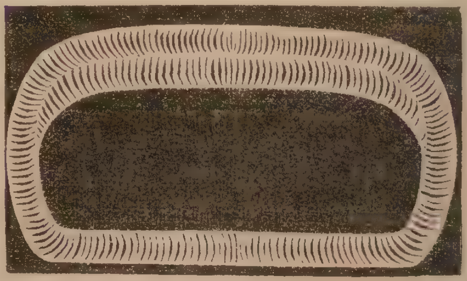
T. ACKS, EDITOR.

THE" GRECIAN BEND" DROP BACK

As shown, is suitable for light open top work, or for close tops, when the shifting rail is used; with this difference, or advantage, that if there is an arm-rail, the upper roll should be continued around to form the arm rest, without breaking the sweep of the welt. I ought here to remark that although those wrinkled or ruffled rolls are now the style in all kinds of goods, yet they look best in leather.

HOW TO MAKE THE BACK.

Four-ply of buckram, pasted together, as usual; mark off the size of the plain smooth centre, paste; lay on the hair, then cover with muslin, and sew it down to the shape of the centre, taking care to sew inside of the pencil mark; next take the leather, and pull (stretch) it all you safely can, then sew it on, taking care to keep it very tight, from end to end, for fear of it wrinkling; pare it off so as to expose the pencil mark; next, sew down your welt, the edge to the pencil mark; then the ruffled roll, run a



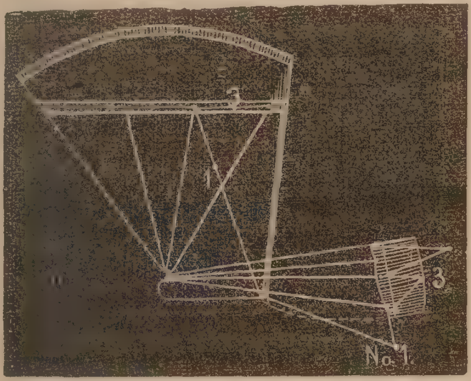
strong thread through it, and gather it up to the desired length—sew it down, stuffing lightly. The top edge may be finished with pasting and seaming, or blind sewed to a pasting welt.

In this connection, let me again repeat, that for all parts where there are no very short turns or bends, trimmers will find that *rattan* is much better than the ordinary cord used for lace or welt. Try it.

A Proposed Improvement in Carriage Joints.

Mr. J. L. Matters, of Vincennes, Ind., has sent us a sketch of the above named idea, which we offer without comment, because we have not been able to experiment with it just yet, and consequently cannot offer an opinion of its merits, but the object aimed at appears to be very ingeniously reached. How it may look we cannot well say; still a trial of its merits will not involve much expense.

In his explanation of the idea, he says: "all Carriage-Makers are aware of the unsightly appearance of tops, after a few months use, caused by the shrinking of, and crushed state of the leather between the two back bows. This can be remedied by this plan, while it still allows of the top being folded down. It is operated by making the long joint stiff, from *fig.* 3 *to fig.* 1, as seen in the sketch. There is a knuckle at *fig.* 1, and when the long joint is '*struck*,' it bends ('strikes') this extra joint also, and thus allows the top to fold flat, and when the top is raised, it, of course, springs this extra joint straight, and keeps the top smooth."



Next month I may be able to recommend this more fully, and *I will* offer a new and beautiful style for trimming *no-top buggies*, which is pronounced the most perfect finish yet introduced for this class of work. I may here state that the idea is not mine, the credit belongs to another, and if he allows it, his name will be given.

A NEW METHOD of manufacturing steel consists in grinding pig iron into powder by a rapidly moving cutter, the extreme friction producing a heat so intense that the iron is burned, and falls down as a reddish brown dust. The superfluous carbon being thus got rid of, the iron dust is melted in a crucible, and when cool is found to be converted into excellent steel.

Poetry.

FARMER JOHN.

Should you meet farmer John in the city,
You'd call him a country greenhorn,
You might look upon him with pity,
Or perhaps with a feeling of scorn.

His great heavy boots, minus blacking,
His straw hat, with wide, ample brim;
With gloves and with necktie both lacking,
And his bronzed face puzzled and grim.

The fops step aside as he passes,
And glance at their dainty, pinched feet,
And lisp their disgust to the lasses,
They happen to meet in the street.

O! come from the dust of the city,
Leave palace and steeple, and dome,
Put by both your scorn and your pity,
'Till you see good farmer John's home.

Far back from the town's noise and bustle,
Where meadows and pastures are wide,
Where leaves on the apple-boughs rustle,
And comfort and pleasure abide.

Where acres with beauty lie teeming,
And promise large produce to bring,
A pleasant white farm-house is gleaming,
And farmer John reigns as its king.

How changed is his face as he nears it,
From that which he wore in the town;
A broad smile breaks over and clears it
From puzzled expression and frown.

His good wife stands ready to greet him
With a smile that thrills through his heart,
And all are so happy to meet him,
Though only a bright day apart

His deep voice grows sweeter and lower,
As baby-lips press his brown cheek;
He is happy, he asks for no more;
He is loved, what more need he seek?

His boys and his girls are so merry,
The table so full and so white,
And all is so happy and cheery,
He envies no ruler his might.

O! ye, with your city notions,
There is something more precious and sweet
Than graceful and elegant motions
In walking the close, dusty street.

And farmer John, green as you call him,
So awkward and so coarsely clad,
Has had this great fortune befall him,
And his whole life is joyful and glad.

◆

THE SONG OF THE SKIRT.

BY WOMAN HOOD.

"And the *trail* of the *woman* is over it all."

With fingers scalded and worn,
With washboard placed aslope,
A woman stood by the steaming tub,
Plying her cake of soap.
Wash! wash! wash!
While the soap-suds spatter and spirt,
And still, with a voice of frenzied pitch,
She sang the "Song of the Skirt."

"Wash!-wash! wash!
While I sweat from every pore!
And wash—wash—wash—wash—
Till I fairly flood the floor!
It's oh! to be a slave
Along with the barbarous Turk,
Where woman has never a skirt to wash,
If this is decent work.

"Oh, men with sweethearts dear!
Oh, men with women of kin!
It isn't the linen they're *wearing out*,
But the linen they're bringing in!
Wash—wash—wash—
While the soap-suds spatter and spirt,
Cleaning at once, with a single wash,
A crossing as well as a skirt!

"Oh! but to smell the breath
Of the perfume bottle so sweet—
With the chandelier over my head,
And the Brussels beneath my feet.
For only one short hour
To feel as my lady feels,
Gayly tripping along Broadway
With a yard or more at her heels."

With fingers scalded and worn,
With washboard placed aslope,
A woman stood at the steaming tub,
Plying her cake of soap—
Wash! wash! wash!
While the soap-suds spatter and spirt,
And still with a voice that you wouldn't applaud,
(Oh, that its tones could reach Miss Maud,)
She sang this "Song of the Skirt."

Youth's Department.

DEFINITIONS OF BIBLE TERMS.

A day's journey was 33 and 1-5 miles.

A Sabbath day's journey was about an English mile.

Ezekiel's reed was 11 feet, nearly.

A cubit is 22 inches, nearly.

A hand's breadth is equal to $3\frac{5}{8}$ inches.

A finger's breadth is equal to one inch.

A shekel of silver was about 50 cents.

A shekel of gold was $8.09.

A talent of silver was $516.32.

A talent of gold was $13,309.

A piece of silver, or a penny, was 13 cents.

A farthing was 3 cents.

A gerah was 1 cent.

A mite was $1\frac{1}{2}$ cents.

A homer contains 75 gallons and 5 pints.

An epha or bath contains 7 gallons and 5 pints.

A bin was 1 gallon and 2 pints.

A firkin was 7 pints.

An omer was 6 pints.

A cab was 3 pints.

◆

SPEAK KINDLY TO HIM.

A farmer once saved a very poor boy from drowning. After his restoration, he said to the grateful fellow:

"What can I do for you, my boy?"

"Speak a kind word to me sometimes," replied the boy, as the tears gushed from his eyes. "I ain't got a mother like some of them."

A kind word! Think of it. That farmer had it in his power to give that boy money, clothes, playthings; but the poor fellow craved nothing so much as a kind word now and then. If the farmer had ever so little heart, the boy must certainly have had his wish granted.

A kind word! You have many such spoken to you daily, and you don't think much of their value; but that poor boy in your village, at whom every other boy laughs, would think he had found a treasure if some one would speak one kind word to him. Suppose *you* speak it. The next time you meet him, instead of laughing at him, speak kindly to him. Then watch him, and see how he looks. See if his eyes do not brighten, and his lips smile. Try it.

Kind words! They are blessed things. Speak them, children, every day. Scatter them like sunbeams everywhere. They will bless others, and then return to bless your own hearts. Kind words forever!

◆

"WE NEVER DRINK."

On the stage were seven or eight soldiers from the eighth Maine regiment. While at the stage house in Lincoln, there came into the office a poor, blind man—stone blind—slowly feeling his way with his cane. He approached the soldiers, and said, in the gentlest tone:

"Boys, I hear you belong to the eighth regiment. I have a son in that regiment."

"What is his name?"

"John ——"

"O yes, we know him well. He was a sergeant in our company. We always liked him."

"Where is he now?"

"He is a lieutenant in a colored regiment, and a prisoner at Charleston."

For a moment the old man ventured not to reply; but at last sadly and slowly he said:

"I feared as much. I have not heard of him for a long time."

They did not wait for another word, but took from their wallets a sum of money, nearly twenty dollars, and offered it to the old man, saying:

"If our whole company were here, we would give you a hundred dollars."

The old man replied:

"Boys, you must put it in my wallet, for I am blind."

But mark what followed. Another individual in the room, who had looked on this scene, as I had, with feelings of pride in our soldiers, immediately advanced, and said:

"Boys, this is a handsome thing, and I want you to drink with me. I stand treat for the company."

I waited with interest for the reply. It came.

"No, sir; we thank you kindly; we appreciate your offer—*but we never drink*."

The scene was perfect—the first was noble and generous, the last was grand.

Remedies and Receipts.

Cement for Leather.—Of many substances lately brought very conspicuously to notice for fastening pieces of leather together, and in mending harness, joining machinery-belting, and making shoes, one of the best is made by mixing ten parts of sulphide of carbon with one of oil of turpentine, and then adding enough gutta-percha to make a tough thickly flowing liquid. One essential prerequisite to a thorough union of the parts consist in freedom of the surfaces to be joined from grease. This may be accomplished by laying a cloth upon them and applying a hot iron for a time. The cement is then applied to both pieces, the surfaces brought in contact, and pressure applied until the joint is dry.

How to Treat Frozen Parts.—Put the frozen part into water in which there is a considerable portion of ice in small pieces. The ice will keep the temperature of the water down to the requisite degree of coldness, but there will be no danger of the freezing going on while the water remains uncongealed. A thermometer is very convenient to test the temperature of the water. If one becomes frozen at a distance from a house, it would be advisable to plunge the hand as deep as possible into a drift of snow, and take some of that to apply to the afflicted parts, as it will be at a temperature much above that on the surface.

Nothing is better settled than that the frozen portion should not be rubbed, as the flesh would become very sore in consequence. The flesh near to that which is frozen may be rubbed however, to good advantage, as that will hasten the circulation of the blood.

Diarrhœa Cure.—A correspondent of the New York Tribune prescribes the following as a sure cure for dysentery and diarrhœa:

Take Indian (or corn) meal, make it into a thick gruel, cook thoroughly, sweeten with sugar or molasses to taste, and grate a little nutmeg in it; it is then ready for use. If taken at the commencement of the disease, a pint bowl of the gruel usually effects a cure. It is best to use the gruel in place of the regular meals. Objection may be made to the corn meal, that it is loosening: so is castor oil or any other physic which is taken to work off a disease, and it is certainly more pleasant to take than castor oil or pills.

Old English Plum Pudding.—To make what is termed a pound pudding, take of raisins, well stoned, currants thoroughly washed, one pound each; chop a pound of suet very fine and mix with them; add a quarter pound of flour or bread finely crumbled, three ounces of sugar, one ounce and a half of grated lemon peel, a blade of mace, half a small nutmeg, half dozen eggs well beaten; work it well together, put it into a cloth, tie it firmly and boil not less than five hours. It should not be suffered to stop boiling.

Cure for Earache.—There is hardly any ache to which children are subject, so bad to bear and difficult to cure, as earache. But here is a remedy never known to fail: Take a bit of cotton batting, put upon it a pinch of black pepper, gather it up and tie it; dip it in sweet oil and insert it in the ear. Put a flannel bandage over the head to keep it warm. It will give immediate relief.

Corns and Bunions.—To cure corns, take a lemon, cut a piece of it off, and nick it so as to let in the toe with the corn. Tie this on at night so that it cannot move, and you will find the next morning that, with a blunt knife, the corn will come away to a great extent. Two or three applications will effect a thorough cure. Bunions are usually difficult to cure; but the following has proved a remedy in some cases: make an ointment of half an ounce of spermaceti and twelve grains of iodine, and apply twice or thrice a day.

Scraps of Humor.

A country youth came to town to see his intended wife, and for a long time could think of nothing to say. At last, a great snow falling, he took occasion to tell her that his father's sheep would be all undone. "Well," said she, taking him by the hand, "I'll keep one of them."

A Reason.—A minister was walking out one day, and passed two little boys, one of whom made a bow. As he turned back he heard the following amusing conversation:

"Why, John, didn't you know that was Parson M——?"

"Yes, of course I did."

"Why did you not make a bow to him?"

"Why, mother don't belong to *his* church."

A lady parting from her husband in the cars, says the Boston *Traveler*, got off the following in one breath: "Good-bye, Will; write to me every day, won't you? I'll expect a letter three times a week any way. Take good care of my Sunday-school class, for I'll want it when I come back. If Miss Smith calls, don't give her more than fifty cents, for we have to support our own church, you know. Don't forget to bring my silk dress and my other shoes. Come as soon as you can. Good-bye. Don't forget your cane, and let your moustache grow."

What Age to Marry.—"People about to marry," who wish to know the proper age, are referred to the following precedents:

Adam and Eve, 0.
Shakspeare, 18.
Ben. Johnson, 21.
Franklin, 24.
Dante, Kepler, Fuller, Johnson, Burke and Scott, 25.
Penn and Sterling 28.
Linnæus and Nelson, 29.
Burns, 30.
Chauncey, Hogarth and Peel, 32.
Woodworth and Davy, 33.
Sir William Jones and the Duke of Wellington, 37.
Wilberforce, 38.
Luther, 43.
Addison, 43.
Wesley and Young, 47.
Swift, 49.
Buffon, 66.
Old Parr, last time, 120.

The Boston *Journal* says: Among the claims allowed by an Accidental Death Insurance Company was the following: "No. 278,966. This gentleman was blown up by an explosion at a paraffine oil works, and receives fifteen dollars a day until he comes down.

A young lady with a long "switch" of another woman's hair trailing fashionably down her back, was somewhat startled while waiting in the depot at Lafayette, the other day, by a kindly old lady who was not "up in the latest styles," approaching her and whispering in a tone so loud as to be audible all over the room—"Your back hair is down, Miss!"

How much Marm?—A clerk in a dry goods store retired one night, having for his bed-fellow an acquaintance dating back to school days. Our informant slept in the next room adjoining, the door of which was partly open. In the middle of the night, he says he was awakened from sleep by hearing the clerk in a loud tone of voice, exclaim:

"How many yards did you say you wanted, marm? Three yards enough?"

The next thing was a tearing noise, and the bed-fellow of the clerk shouted out:

"What are you doing—you have torn my shirt from bottom to top."

The poor dreamer imagined himself in his store, waiting on a lady customer who wanted three yards of calico. The shouts of merriment which the event created, can well be imagined.

Miscellaneous.

Castor oil is recommended for greasing wagons, because it makes them run easy.

By chemical process, knife-handles and fine tooth combs are made from potato pulp.

England is said to have had a rage for velopedes thirty years ago, and Michael Faraday was a daring rider.

Man is fearfully and wonderfully made. Reader, if you weigh 140 pounds, 70 of them are water, and if you squeeze yourself in a hydraulic press, about six bucketsful will run out.

The uphill part of coasting has been reduced from labor to fun, by a couple of Massachusetts Yankees, who have invented the "geluniocipede," for the propulsion of hand-sleds by the rider.

An octogenarian says: "I was born at the wrong time. When I was a young man, young men were of no account. Now I am old, I find old men are of no account."

Outward politeness cannot be learned in set forms at school, for at best it will be hollow and deceptive; genuine politeness, like everything else genuine, comes from the heart.

While his mother lives, a man has one friend on earth who will not desert him when he is needy. Her affections flow from a pure fountain, and cease only at the ocean eternity.

Wooden Car Wheels, costing four times as much as those of cast iron, are used on one car on the Hudson River Railroad. They purport to be safer than the common wheel, and much less noisy; also, to save the wear of the rails.

A Handsome Improvement.—*Old Wilmington Foundry to be Torn Down—A Market House and Carriage Factory in its Stead.*—Messrs. Gregg & Bowie, carriage manufacturers, at the north-east corner of Third and French streets, have purchased of Messrs. Betts the old "Wilmington Iron Foundry," at Eighth and Orange streets, and design tearing it down at once. In the spring they intend erecting on its site a fine carriage factory, four stories in height, with a market house on the first floor. This will be a great improvement, as the old foundry building has had a gloomy look ever since it was closed, and Messrs. E. & A. Betts moved to their new building on Newport road. It will be pleasant to see the old corner alive with business again, and still more pleasant to see a handsome new building there.—*Delaware Tribune.*

The New York *Tribune* is said to have made $180,000 profit last year.

Fifteen years ago a gentleman sold a piece of land in Des Moines, Iowa, for $500. A week ago he bought the same lot from the person to whom he sold it, at the slightly advanced price of $27,000.

A singular coincidence in the death of the "great and good Washington" is, that he died in the *last* hour, in the *last* day of the week, in the *last* month in the year, and in the *last* year of the century, viz: Saturday night, 12 o'clock, December, 1799.

Strange Discovery on the Connecticut.—A valuable discovery was strangely made a short time since on the banks of the Connecticut River, three miles from Middletown. A gentleman living in the neighborhood went out gunning on the Fourth, and in the course of his perambulations reached the river bank. All of a sudden it gave away beneath him, and he slid down the slope 40 feet, feeling at the same time that he was sinking into the sand. He thought it a quicksand deposit, and gave himself up for lost; but he slid down safely with his gun, sinking in however, above his knees. After getting up and shaking off the fine soil, he next thought of cleaning out his gun, for in the fall it had become filled and covered with sand. What was his surprise to find that in wiping off the barrel he had polished it up bright. It immediately occurred to him that it was emery, and that somebody would make a fortune. Off he starts, post haste to the owner of the land. "How much do you want for that bit of land of yours on the bank?" "Well, I paid $300 for it and you can have it for $600, I guess." "Done!" Sure enough it was first-rate emery, of which there is but one other bank there, discovered by the same man. Emery is very valuable, and as most of it is imported, the 4th of July rambler has to thank Dame Fortune for being very good to him. The deposit is quite large.

Answers to Correspondents.

J. S., Dunnville, Ont.—Your question will be answered in our next. We are not at present fully satisfied whether or not there is a sure preventative.

Mrs. J. T. G., Wareham, Mass.—Verses accepted, and will appear in the next number.

N. B. E., Three Rivers, Mich.—We have handed your letter over to Spoke Shave, who will answer at length in the April number.

A. S. B., Evansville, Wis.—Will endeavor to give, in the April number, the drawings you desire. For setting axles, see February number, page 75. A cut of Shifting Rail is given in this number.

P. E. N., Sacramento, Cal.—The Permanent Wood Filling is used by the *majority* of the first-class shops, and we think is peculiarly adapted to your climate.

E. B. B., Allegan, Mich.—We will insert cuts of Jump-Seat Fastenings in our next. We did not think it necessary to mention that the body was round-cornered. The light perpendicular lines, at the back corner of the seat and body, *always* indicate a round corner. The body is open behind.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—Partner to take the place of retiring partner in the carriage business; doing a good business. Capital required about two thousand ($2,000,) dollars. Poor health reason for selling. Address Parsons & Briant, Morristown, N. J.

AUTHORIZED AGENTS.

Persons desiring to act as Agents for the Journal, will be required to satisfy us of their responsibility and integrity. Those published as Agents are authorized to receipt for subscriptions so long as their names are continued on this list.

Charles W. Veatch, General Traveling Agent.
George B. Hamilton, Agent for Felton, Rau & Sibley.
E. N. Dougherty, Camden, N. J.
M. W. Allen, San Francisco, Cal.
Chas. E. Ward, Rahway, N J.
James D. Burke, Brooklyn, N. Y.
James E. Curtis, Schenectady, N. Y.
H. L. White, Boston, Mass.
John Lodewick, Troy, N. Y.
John Kemp, Ravenna, Ohio.
J. W. Hibbs, Washington, D. C.
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George D. Fry, Cincinnati, Ohio.
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Lem. Cretors, Leavenworth, Kansas.
Bryant & Stulen, Towanda, Pa.
James J. Wright, Lowell, Mass.
Brigham & Warren Three Rivers, Mich.
Adam Meisel, Wilmington, Del.
R. H. McDanel, Wilmington, Del.
J. B. Edwards, New Haven, Conn.
Joseph Brown, West Troy, N. Y.
E. H. Murray, agent for Felton, Rau & Sibley.
E. Huested, agent for Felton, Rau & Sibley.

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

Philadelphia, February 20, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.
Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 35 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.
Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50
Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.
Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
" Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.
Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.
Basket-wood imitation, for panels, per foot 60c.
Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.
Bolts, Phila., 35 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.
Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1; 1 inch, $1.30.
Buckram, per yard, 17 to 20c.
Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.
Castings, mall, per lb., 13c.
Cord, seaming, per lb., 25c.
Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
" body, per yard, indigo wool-dyed, $3.75 to $4.50.
Coteline, per yard, $4 to $8.
Curtain frames, per doz., japanned and sil., $1.10 to 1.50.
Damask, German cotton, double width, per piece 30 yds., $16.50 to $18; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 80c. per yard.
Dashes, buggy, per dozen, rough, $20; silver plated, $28. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.
Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.
Drugget, felt, per yard, $1.35 to $2.
Enameled cloth, per yard, muslin, 5-4, 35c.; 6-4, 53c.; drilling, 5-4, 48c.; 48 inch, 52c.; 6-4; 62c.; duck, 5-4, 67c.; 50 inch, 70c.; 6-4, 80c.; pat. tan back muslin, 5-4, 48c.; do., drill, 5-4, 60c.; 48 inch, 65c.; flock drill, 48 inch, $1.00; do., muslin, 85c.; vul. rubber drill, hea., $1.50; light, $1.50; 48-inch,
Felloe plates, wrought, per lb., 16c.
Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.
Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.
Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.
Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.
Patent Improved Knob and Buttonholes, a good improvement, $6 per gross.
Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 8c.; silk stripe, 10½c.; silk barred, 13½c.
Lamps, per pair, fine, $15 to $20.
Leather, per foot, dash, No. 1, 16c., do., No. 2, 13c.; railing and collar, 25c. to 28c.; enameled top, No. 1, 26c. to 29c.; do., No. 2, 24c. to 26c.; enameled trimming, 26c. to 28.
Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $4.50 per gr.
Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.
Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting tenoning machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.
Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.
Moss, per lb., 10c. to 12c.
Name plates, per do., en., Ger. sil. and real sil., $4 to $4.50.
Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, star and flint, per ream, $4.50 to $6.00.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, patent black, $11.75; do., Bright, $13.75; Baltimore patent black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
" Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $3.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95, 1⅛. 2.10; $1¼, $2.25.
Shaft Sockets, ball, ¾ inch, $2.05; ⅞, $2.20; 1 inch, $2.35; 1⅛, $2.50; 1¼, 2.65.
" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.
" ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8; 5 bows, $10.50.

Slat irons, wrought, N. Y. pat., per doz. sets, 4bows, $12.
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ in., 1c. per lb. more.
" Bright tempered, per lb., 1¼ in., 20c.; 1½ in., 19c.
" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50: ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top props, silvered, per sett, common, 31c.; extra, 70c. to 90c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.
" " Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 55c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per doz., No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.
" imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.25 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.
" white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in, diameter, $2 to $2. 25 per set,

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts, express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra. $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color' $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.50; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 45c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.: pure emerald, 50c.; pure Paris, 50c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.: best rose pink, 20c.; pure Indian red, 20c. Vermillions—English pale, $1.60; deep, $1.50, German gothic pale, $1.50: deep, $1.50; Chinese, $1.60: Trieste, $1.25; Italian. 45c.; American, 35c.; English Venetian, 5c.; red lead, 15c.

Whites—Pure lead, per lb., 14c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.: Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c.; English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 65c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1: Camel's hair striping pencils, assorted, per dozen, 45c.: sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8: small, $6.50.

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SUCCESS IN BUSINESS.

In the outset we will state that, in speaking of success in business, we do not wish to hold up to view that class of men who have amassed princely fortunes in a few years, by bringing to bear, not only their superior business talent, but who have not scrupled to grasp eagerly after unlawful gains, by adding cunning, deceit, and, at times, utter heartlessness, in the acquisition of wealth.

It is too often the case that we look upon success in business as that condition only in which a man has secured to himself sufficient income to *retire*, and lead a life of comparative ease and pleasure.

While we would say nothing against an individual choosing to retire from active pursuits, and enjoy the fruits of his labor, we do think that the example thus set has a tendency to create in others a desire to *speedily* arrive at a like position, careless of the means used to attain the end.

We hear occasionally of a man who, by a bold speculation, has "made a fortune" in a few months; but the majority of business men are not gifted with that keen foresight and courage which are so essential to the speculator, and must, therefore, be content with small gains, accumulating but slowly year after year.

It is well that it is so; for the cares and disappointments attendant on the conducting of any business keep down pride of heart, and secure to society a majority of that class of men who can sympathize with the unfortunate and downtrodden, and who give more liberally to the rearing of those institutions which benefit and improve the masses.

Success depends, in a great measure, on a knowledge of the business engaged in, the proper application of industry to the materials required, frugality, promptness in meeting engagements, and good moral character.

In no occupation we can name are these more essential than to those who engage in the manufacture of carriages; yet how few out of the whole number, who claim to be carriage-makers, have a good general knowledge of the business. Four distinct branches are to be looked after—wood-work, blacksmithing, painting and trimming. The material used by the respective branches are entirely dissimilar and costly, and requires the utmost vigilance on the part of the proprietor to see that there is no unnecessary waste.

We shall, therefore, notice, as briefly as possible, some of the principal points to be considered in successfully conducting the manufacture of carriages, and would remark that we are greatly indebted to one of the principal manufacturers of this city for his experience, from which we have obtained some important points now under consideration.

CONVENIENT AND COMFORTABLE WORKSHOPS. Men can, if they choose, do a greater amount of work, with more satisfaction to themselves and employers, in a clean, well-ventilated shop than they can in the opposite. How often is it the case that the smith department is in some cold shed, or in a damp, dark and poorly-ventilated cellar, with ground floor, and seldom, in either case, do we find, during a long cold winter, any fire or heat save what comes from the forge. Allowing that the forger and helper can, by constant exertion, and the little warmth they receive from the forge, keep passably warm, (except the feet,) with what little spirit does the filer or finisher enter upon his work on a cold morning. His tools cold, the iron he touches stick to his fingers, and between rubbing his hands and stamping his feet many hours are actually lost to the employer during the day. Hands become dissatisfied with their situations, and when business revives obtain employment elsewhere, just at the time when the employer can least spare them and *good* hands are scarce. Much loss is occasioned by introducing new hands, supposing they can be easily obtained, which is seldom the case in busy seasons.

Much can be said respecting all the different departments, but none are so much neglected as the smith shop. Make each department comfortable, light and well-ventilated, and when you have hands that suit you change as seldom as possible.

We shall continue this subject in next number.

VELOCIPEDES.

Velocipedes have now been constructed with one, two, three and four wheels, called respectively the unicycle, bicycle, tricycle and quatracycle. With the unicycle, the rider sits within the wheel, and propels the novel machine by using the hands. Those with two, three and four wheels may be propelled by either the hands or feet. They are steered either by the front or hind wheels, and are adapted to travel on the land, water, ice and snow. They may be constructed with canopies to protect the rider from the sun, with sails to aid in their propulsion, or with a footman who is placed at the rear of the vehicle to perform the labor by means of treadles, while the "*gent*" sits at his ease, having nothing to do but steer.

The young, middle aged and old, male and female, may enjoy the sport.

They are admired by all classes, from the "*plean*" to the Emperor on the throne.

Yea, more, the excitement is on the increase, and unless suddenly checked by some unforseen event, there will soon be a velocipede on sale (or to give away) to every man, woman and child in the civilized world, and a few to spare for philanthropists to present to the naked barbarians of other climes; and after *they* are supplied, to present a batch of them to the *red enemies* of the Pacific Railroad.

☞ A few more of our latest edition of OFFICE CHARTS left. Sent post-paid on roller for $1.

THE NEW ENGLAND STATES.

Continued from page 84.

On the 14th we were again in motion, speeding on toward Haverhill. Here we found but three shops, none of them doing much. Jumping aboard the *stage* we were soon banging along in the direction of Amesbury as fast as horse flesh could take us. Ah! that was a delightful (?) ride. We left Haverhill at four, and arrived at Amesbury at seven o'clock. It was a bitter cold night, and "nary" a warm "soapstone" on which to place our freezing feet, and then we happened to strike the "accommodation line," which stopped at every corner and cross-roads, to deliver a box of matches or segars, or to take an order from some one of the eight-by ten-storekeepers, who wanted the driver to "fetch over a bundle of toothpicks or a few whetstones." Mr. Gould, the driver, was very accommodating, but then that did'nt make our feet any warmer. "The wheelin" was none of the best, so we were jostled and banged about until at last we arrived safely at our destination. A warm supper, and after that a good segar, quieted down the nerves, and our petty annoyances ended in smoke.

The following morning we began the tedious labor of presenting the claims of the JOURNAL to those who were not subscribers. It is surprising what a variety of questions are directed at an unfortunate canvasser; as different as are the faces of men, so are the inquiries. But we "spoke our honest convictions," because we found it paid.

At Amesbury, West Amesbury, and South Amesbury, the three divisions of this great carriage-making community, we found no difficulty in securing a large number of subscribers.

There are some fifty or sixty shops in the three cities inclusively. Two or three grades of work are built. The styles are very good on all classes of work, the painting showy and generally well done. There appears to be no lack of good stripers. This may be accounted for when we remember that the "Portland" sleighs present an unlimited field for design and practice.

From four to five thousand vehicles are annually manufactured, a good share of which are first-class. Seth Clark, Hume & Morrill, Judkins & Goodwin, O. H. Sargent, I. W. Sargent and Wm. Colby, are among the leading builders.

We next visited Dover, N. H., Biddeford, Saco, Portland, Bath, Lewiston, Gardiner and Kendall's Mills, Maine. Arriving at Portland, on December 24th, we felt we had reached the head-waters of sleigh making. There is no mistaking a Portland style of sleigh; the same sweeps and proportions, with scarcely a variation, is used year in and year out by manufacturers. At Kimble's "jump-seat shop," as it is termed, we saw sleighs of different colors in painting and trimming; there were large sleighs and small ones, single and double, and single and double combined, many of them elaborately finished. But they were uniform in outline; we wondered why there was no improvement made, and confess that we became tired of looking at them.

At Bath, Maine, we saw the most beautifully finished "Portlands" we had anywhere met. Mr. Bailey, the builder, has certainly added much to the appearance of the "Portland," in completeness and delicacy of finish. While other manufacturers have equalled the Bath sleigh, in painting and trimming, in our judgment, none have produced so complete a piece of work, taken as a whole.

On the line of the Portland and Kennebec Railroad, there are but few shops, consequently but few carriages manufactured. There was fine sleighing through Maine, and the ice harvest was being gathered in at Gardiner.

From Kendall's Mills we retraced our steps, calling at Portsmouth, N. H. Leaving Portsmouth, January 1st, at 4 P. M., for Concord, we had the extreme pleasure of being detained by a blinding snow storm. After a weary ride, and many stoppages, we reached Concord at 12.30 A. M. The time between the two points named is about three hours. We were therefore five hours and a half behind time.

The builders in Concord were not complaining, which was somewhat cheering to us, after hearing the opposite day after day.

The work built is generally heavy, and is what we would term old-fashioned. But the reputation which the Concord coaches, buggies, &c., have attained by actual wear, silences all our objections as to proportions. Abbot, Downing & Co., who have a wide reputation for first-class work, in their line, carry on very extensively. Harvey, Morgan & Co., pay more particular attention to light work, and are establishing a good trade.

Nashua is a beautiful place, and we should think a desirable summer residence. But few carriages are built, the shops are small, and not well adapted to the business. At Worcester, Springfield, Pittsfield, Belchertown, &c., there was no great amount of work being built.

Here one feels that he has arrived within the magic influence of New York, and in this section the flat-sided Portland cutters give place to the Keene, Orange and Albany swelled bodies. The buggies are after the New York patterns, and an occasional Coach or Landau reminded us that we were nearing home.

The last city we visited was Hartford, Conn. Eighteen years having passed since we had the pleasure of looking in upon the people, (*who insure the world, "and the rest of mankind,"*) we were enabled to judge as to the improvements made during that time.

The city, indeed, has made rapid strides, and to-day is beautiful, almost beyond description.

We canvassed the city pretty thoroughly, and secured several subscribers. After looking through the different factories, we concluded that Hartford could show some light work which could not easily be surpassed.

There are five or six shops, that of MANSUY & SMITH being the largest and best arranged. We do not think there is a more genteel looking carriage shop in the country. It is a brown-stone front, and so gracefully proportioned, that it would be mistaken for an *insurance building*. Leaving Hartford, on the night of the 12th of January, we arrived safely at Philadelphia on the 13th, wearied with constant traveling, day and night.

In conclusion, we must tender our heartfelt thanks to the kind, unassuming and good people of the places we visited. C. W. V.

THE JUMP-SEAT.

In the February number of the JOURNAL we published the "Jump-Seat Ætna Buggy." Since then several builders have written us to know if there was any patent on it—that is, on the jump-seat and its connections, or fastenings. We immediately addressed a line to Mr. C. P. Kimball, of Portland, Me., whom we heard claimed the exclusive right. We did not receive his answer in time for the March number, and were not a little disappointed, knowing that certain parties were anxious to build the Ætna Buggy, but did not wish to infringe on any patent. We are unable to divine how Mr. Kimball's claim "covers every movement of both seats," for letters patent have been granted to other parties covering the *front* seat. We trust that Mr. Kimball's notice, which we give below, will clear up this matter, and settle it speedily.

PORTLAND, ME., March 16, 1869.

I. D. WARE, ESQ.—*Dear Sir:*—Some time since we received a letter from you inquiring about the patents on our jump-seats. It got mislaid and was not answered as promptly as we intended.

We will now say, we have no less than *four* patents, covering every movement on both seats.

We hear that some parties are infringing, which we regret, as we must and *shall* protect our property by the severest course of law.

We send you numbers and dates of the patents, so you can see for yourself what our claims are:

PATENTS.

No. 16,528, Feb. 3d, 1857, to Cook Bros.
No. 19, Jan. 1st, 1861, to J. C. Kimball.
No. 45,050, Nov. 15, 1864, to C. P. Kimball.
No. 69,102, Sept. 24th, 1867, to C. P. Kimball.

We will sell shop rights, or allow persons to build our carriages, for $20 each.

We deem this to be fair and equitable, and much cheaper in the end than to infringe.

We also sell bodies, with seats all hung, for $75, and any good carriage concern can make money at finishing.

Yours, &c., C. P. KIMBALL & Co.

☞ We would direct especial attention to the articles from our correspondents this month; not that we endorse the views of all, but hope they will be the means of awakening in others a consideration of the subjects here treated upon.

VELOCIPEDE WHEELS.—See colored page advertisement.

DIRTY WORK MAKES CLEAN MONEY.

In company with a friend from a distance, we lately paid a visit to the Mint in this city, which, by the way, was the first one in the United States.

THE BUILDING

Is situated on Chestnut, between Thirteenth and Broad streets. It is a handsome brick structure, faced with marble. Its style of architecture is in imitation of a Grecian temple of the Ionic order. It has a front of over 100 feet on Chestnut street, and extends back to Penn square. The portico in front is 62 feet wide, and its entablature, which is of white marble, is supported by six marble columns. The main entrance is from Chestnut street, into a hall, where persons connected with the institution are in attendance to escort visitors through the establishment.

VISITORS

Are admitted daily, except Saturday, between 9 and 12 o'clock. In the second-story front there is a cabinet, containing a magnificent collection of the coins of all nations and ages, minerals, medals and curiosities.

The working apartments are on either side of a hall or passage way, and contain the furnaces, tools and machinery, adapted to the several divisions of the work. The workmen are not allowed to enter any room, except the one in which they are employed, nor are they permitted to leave the building during working hours. The visitor obtains a glimpse of the interior operations from the entrances to the rooms, not being permitted to enter and inspect things too closely.

It would be the height of folly to *wax the soles of your boots, for there is nothing lying around loose* worth picking up.

In the first apartment we visited men were engaged moulding bars, from which the nickel coins are cut; each mould forming two bars. In the next room the *precious metals* are treated in like manner.

The droppings and wastage are saved by means of a false iron floor of open work; the interstices allowing the particles that fall to collect on the true floor. The false floor is raised four times during the year, when the droppings are secured, which have amounted to $75,000 in a year.

Passing on, the visitor arrives at the engine room, or space occupied by a twenty-horse-power engine, which noiselessly performs its work. Near by is an apartment fitted out with the most perfect machinery, for cutting out coins from the bars. The scraps are remelted, again formed into bars, thus allowing but a small per centage of loss.

We were next ushered into the stamping room. Here the visitor may feast his eyes on machinery, which *we* think cannot be surpassed, and if there were no other evidences of the skill of Philadelphia mechanics than is here displayed, it alone would suffice to place them in the front rank.

The machines for stamping coins are arranged on each side of the room, and inclosed by a railing. The driving shaft is beneath the floor, a single belt connecting each machine therewith; the power being supplied by a small engine, which has faithfully and silently performed its work for more than thirty years.

It is a master-piece of mechanism, and must be seen to be fully appreciated. The fly-wheel in its revolutions shows not the slightest variation, and has been pronounced, by competent judges, a marvel of exactness.

Ladies are here employed; we saw but one at work. She sat in front of the machine with her lap full of plain two cent nickel pieces, having nothing to do, apparently, but to keep a small tube filled with the unstamped coins. The tube rests over a small sliding table, which, in its motions, forward and back, removes a piece of coin, and places it under the movable die. Both sides are stamped at the same instant.

The fair employee wore buck-skin gauntlets to protect the hands from being soiled. In fact, the work throughout is what may be termed "very dirty," and forcibly reminded us of the adage, "*Dirty work makes clean money.*"

This completed the mechanical department, and our guide then showed us to the entrance of the cabinet, saying, "Gentlemen, walk in and spend as much time as you wish."

THE CABINET.

Here the visitor may while away an hour or two, examining the collection of coins of all nations and ages, minerals, curiosities from Africa, Central America, medals, &c., &c.

WIDOW'S MITE.

The "Widow's Mite," in this collection, attracts a great deal of attention. "It was found near the site of the Ancient Temple of Jerusalem, and there are solid reasons for affirming that it was a *lepton*, (translated 'mite,') dating as far back as the Christian era. It is a bronze composition, and the smallest of ancient coins, weighing only ten grains." The above cut is given the exact size.

100 P'SENNY, (COPPER.)

A Japanese coin, value about four or five cents, the cut showing the exact size. "The series of Japanese coins consist of three sizes of gold, two of silver, and three of an alloy of inferior metals." They are of an oval, round and rectangular shape. The largest piece we saw measured six inches, by three and three-quarters. It was an oval shape, curiously stamped, and, from the following account of it, must have a value attached to it by the Japanese government unknown to other people. "Any person removing this coin out of the country *purposely*, the penalty is death. Should it be taken out *accidentally*, ten years imprisonment."

SILVER QUARTO ITZEBU, 9¾ CENTS.

This is the smallest of the Japanese silver coins. It is the fourth of an Itzebu.

II. MARIEN GROSCHEN, 2 CENTS.

Silver coin of Germany, which bears the date 1692, consequently it is one hundred and seventy-six years old. We merely give it as a curiosity, showing that monograms, now fashionable, were used at that time.

It would be folly to attempt to enumerate the curiosities in our limited space, and will close by giving an idea of the rules governing employees.

Eight hours is a legal days' work.

Hands are not allowed to leave the building during working hours, except in case of sickness.

They are allowed half pay during illness, provided they furnish a certificate from the attending physician to that effect.

The loss of one hour is deducted at the rate of one-eighth of the wages received per day.

Hands are required to bring their dinner. If sent to them, it is distributed by the door-keepers.

No over-work without consent of the directors.

* * *

"THE COACH MAKERS'—WHAT IS IT?"

In a late number of an *Oriental* monthly, published on the banks of the Hudson, there appeared a few verses dripping with slime, beneath the title—"The Coach Makers'—What is It?" The concluding stanza disclosed to us the fact that the slanderous rhyme was directed at our humble self and the JOURNAL, which is winning its way too rapidly among the fraternity to suit the grasping and avaricious disposition of a very *modest* rival. After carefully considering the matter, we have arrived at the conclusion that the editor, in the attempt to injure us, has himself received a thrust which may be very painful before the wound heals, unless he should succeed in keeping down *inflammation*.

We are led to believe that the editor has had a hand in this *choice* production, as *his* natural disposition would lead him to seek in Pluto's regions for a vocabulary best suited to express his intense hatred towards the JOURNAL. Hear him—

"'Tis, after all, a sheet infernal—
A thing miscalled a monthly journal."

And then there are such select words as "puppy," "shallow brain," "old refuse," "remnants of past history," (not so bad,) "trash," "the lie," "vile slanders," "mean," &c., &c.

This panful of dirty water, which he has aimed at us, while passing beneath his *exalted* station, will do no more than soil our clothing, and we will reappear with a better suit

It is a strange coincidence that, in his attempt to do and say so smart a thing, he should have woven in his own name in the form of an acrostic, and that "the remnants of past history" and "old refuse," &c., should so fitly apply to his own publication. Proof. Examine for yourself, and you will find *pages* devoted to "the remnants of past history"—Egyptian, Asyrian and Persian—Museum, Processions, &c., and only *lines*, few and far between, devoted to practical information on carriage making.

The following is the doggerel in question, with the single exception, we have arranged the spaces to suit ourself, in order to display the acrostic.

"THE COACH MAKERS'—WHAT IS IT?"

BY S. G. H. ARVEY.

"*R* esembling nothing seen before—
O r, that we wish to see again:
T is not a lion—for its roar
I s like a puppy's cry of pain.
D evoid of either worth or wit
E ach month it takes a journey—

Struts and tells how big it is,
To get the people's money.
The Ed. he racks his shallow brain
Something of value to produce;
His labored efforts are in vain.

N othing comes thence but old refuse—
O dds and ends of things gone by,
T he remnants of past history—
T rash, which he vends as latest style,
A nd varnishes with many a lie;
R eporting slanders which are vile
T o gain a hoped-for reputation,
S tooping to all that's low and mean

To ornament his vile creation.
Tis, after all, a sheet infernal—
A thing miscalled a monthly journal."

Beginning at the fourth line from the bottom, read the capitals upward at the head of eight lines; now skip five, and read the remainder, and you are placed in possession of the name and profession of the refined and very modest publisher.

"THE HUB,"

Is the title of a handsome advertising sheet, published monthly at the "Hub of the Universe," (Boston,) by Messrs. Valentine & Co., Varnish Manufacturers, and also the sole manufacturers and agents of the "Permanent Wood Filling." The design of the paper is to lessen the labors attendant upon the introduction of the "Wood Filling," by collecting whatever may be of interest concerning its claim as a substitute for lead. Objections are stated and answered. A full list of names of those who first began using the "filling," and who have sent in second, third, &c., orders, carriage items, railway items, chemical column, selections and advertisements. Price, per year, fifty cents; single copy, five cents. May success attend it.

GLEANINGS BY THE WAY.

An Old Firm.—Robt. Slade & Son, Carriage Makers, Boston, Mass., was established in 1830, under the name of Slade & Whiton. Twelve years ago it was the leading manufactory in New England, and is at present doing a very respectable business. * * A Veteran Trimmer.—Robert Slade & Son have in their employ (or did have) a trimmer, Mr. Cushing, who had attained the age of seventy-five. To all outward appearance, he is good for twenty-five years more. He has worked for the firm about thirty years. * * Some painters in the New England States say "*scour*" instead of "*rub*" in speaking of *rubbing rough stuff*. * * Fillmore Kelly, author of "Dollars and Dimes," resides at New Bedford, Mass. We heard him recite the verses on promise of a *dime* to buy a glass of rum. * * They shingle a great many of the frame houses in New England on the outside, instead of using weather-boards. * * A pretty young girl "flagged" the train at a point near Boston. * * Long Leases.—The Chester Iron Company hold leases running from 300 to 1,000 years, at their Emery Mines, at Chester, Mass. * * Scarcely a trace of the great fire at Portland, Me., is now visible. The city lost many noble shade trees, which it will take years to replace. But they have been more than compensated for by the magnificent blocks of buildings which have risen, Phœnix-like, from the ashes of tottering shanties. * * In New England they put tarred paper between the weather boards and sheathing, on frame houses, and lay all floors double. * * In the West they say "*body loops;*" East, "*shackles;*" *way down East*, "*hanging irons.*" * * At Gardiner, Me., the lumber trade is carried on very extensively. In the winter season the shrewd Yanks *saw* out a good summer's business from the frozen waters of the Kennebec River. * * The streams running through the New England States are all compelled to look in under *somebody's* mill and do a certain amount of work before they are permitted to reach the ocean. * * The Phœnix Hotel, at Concord, N. H., burns a cord of wood daily in the winter season. * * It took the revenue gauger four days to measure and stamp the liquors on hand in Nashua, N. H. He found some three thousand gallons. * * We were in a small carriage shop in ——, N. H., where a portion of the wood-shop was set apart as a "*hennery.*" Hefty shop, that. * * Population of the New England States in 1860—Maine, 628,600; New Hampshire, 326,073; Vermont, 315,908; Massachusetts, 1,267,329; Rhode Island, 174,620; Connecticut, 461,838. * * Mr. Colby, of South Amesbury, Mass., has a well-arranged blacksmith shop. The room is 36 by 50 feet. The forges are set angling, so as to economise space. The vise benches are placed near the anvils, saving the smith many steps. A treadle-drill, placed in the middle of the room, is convenient to all hands, and does its work with astonishing rapidity and ease. * * Smokers, "down East," are partial to the pipe, and generally use plug tobacco, cutting it down as they need it—consuming often a dozen or fifteen matches in the attempt to keep the tobacco lighted. * * From 1,600 to 2,000 sleighs are built annually at Westboro, Mass. * * The ruins of an old mill stands in the public square at Newport, R. I., which was built by—*they don't know who.*

PATENTS ON THE VELOCIPEDE.

Cadiz, Harrison Co., O.

Mr. Editor:—Can you inform me whether all the velocipedes now before the public are patented or not? I wish to get one up for myself, but do not wish to infringe on any patent.

Yours, respectfully, J. Z.

Having received several letters similar to the one above, we can do no more than insert the subjoined list of patents, and leave those who are desirous of building velocipedes to assume their own risks. From the number of patents that have been issued, wherein the patentees claim such an almost endless variety of improvements, one would be at a loss to ascertain who would be at liberty to construct a velocipede.

On the French bicycle there are patents on the reach or frame, patents on the boxes, patents on the crank, patents on wheel guard, patents on the connecting of the wheels together at any point between the wheels, &c.

And now amid all this array of claims, Mr. Calvin Witty, of New York, announces to the world that he is the owner of the patent granted to P. Lallement, Paris, France, November 20, 1866, No. 59,915, and that the two-wheeled velocipedes being manufactured are an infringement on the said patent.

"To all whom it may concern. You are hereby notified that letters patent No. 59,915, granted Nov. 20, 1866, secures a velocipede with the two wheels, treadles and guiding arms, and that the velocipede you are manufacturing is an infringement upon the said patent. The present is to require you to cease the further manufacture of said velocipede, and to settle with me for all past infringements of the rights under said patent. Signed, Calvin Witty."

He claims "The combination and arrangement of the two wheels, provided with the treadles and the guiding arms, so as to operate substantially as and for the purpose herein set forth."

As Mr. Witty will have to contend with capitalists who are manufacturing velocipedes in great numbers, which appear to be an infringement of the rights under said patent, we may look for an exciting time among the contestants.

The following is a list of patents issued in this country up to this date:

No. ——, W. K. Clarkson, New York City, June 26, 1819.

No. ——, G. Parker, Providence, R. I., Nov. 21, 1825.

No. 19,092, L. Kelner, Brooklyn, N. Y., Jan. 13, 1858.

No. 30,192, S. W. Barr, Mansfield, O., Oct. 2, 1860.

No. 35,583, H. Boyd, Watertown, Wis., June 17, 1862.

No. 36,160, A. Longett, New York City, Aug. 12, 1863.
No. 41,310, P. W. Mackenzie, Jersey City, N. J., Jan. 10. 1864.
No. 44,256, J. Goodman, London, England, Sept. 13, 1864.
No. 46,795, H. A. Reynolds, New York City, March 7, 1865.
No. 47,220, W. Quin, Philadelphia, Pa., April 11, 1865
No. 53,209, J. G. Wilkinson, Quincy, O., March 13, 1866.
No. 54,201, H A. Reynolds, New York City, April 24, 1866.
No. 59.918, P. Lallement, Paris, France, Nov. 20, 1866.
No. 64,043, F. G. Hooppner, New York City, May 7, 1867.
No. 71,561, C. A. Way, Charleston, N. H., Nov. 26, 1867.
No. 71,562, C. A. Way, Charleston, N. H., Nov. 26. 1867.
No. 73,018, M. Newman, Unadilla, N. Y.. Jan. 7, 1868.
No. 74,058, L. Derosier, New York City, Feb. 4, 1868.
No. 75,531, W. G. Crossley, Cambridge, England, March 17, 1868.
No. 77,478. O. F. Gleason, Farmington, Me., May 5, 1867.
No. 79,523, B. P. Crandall, New York City, July 7, 1868.
No. 79,656, Hanlon Brothers, New York City, July 7, 1868.
No. 80,425, H. A. Reynolds, Brooklyn, N. Y., July 28, 1868.
No. 81,698, A. Christian, New York City, Sept. 1, 1868.
No. 82,319, D. Hunt, Jr., Worcester, Mass., Sept. 22, 1868.
No. 83,035, C. K. Bradford, Lynnfield, Mass., Oct. 13, 1868.
No. 83,696, C. N. Cutter, Worcester, Mass., Nov. 3, 1868.
No. 84,183, E. H. W. Blake, Chicago, Ill , Nov. 17, 1868.
No 85,337, S. M. Skidmore, Brooklyn, N. Y., Dec. 28, 1868.
No. 95,501, S. A. Wood, Manitowoc, Wis., Dec. 29, 1868.

THE FOLLOWING BEAR DATE OF 1869.

No. 85,527, John H. Irwin, Philadelphia, Pa.
No. 85,640, Cornelius Gallaghan, Boston, Mass
No 86,153, John E. Hawkins, Lansingburg, New York.
No. 86,235, WM. H. LAUBACH, PHILA., PA.
No. 86,251, Daniel T. Robinson, Boston, Mass.
No. 86,338, George D. Greenwood and Frank H. Husted, Buffalo, N. Y.
No. 86,405, John H. Irwin, Philadelphia, Pa.
No. 86,406, John H. Irwin, Philadelphia, Pa.
No. 86,495, Joseph Beck, New York City.
No. 86,545, E. N. Huntsman, Allegheny, Pa.
No. 86,573, James A. Morrell, New York City.
No. 86,682, Charles H. Miller and Geo. Ellis, Cincinnati, Ohio.
No. 86,738, Wm. Donovan, Philadelphia, Pa.
No. 86,834, Wm. Hanlon, Assignor to George Alfred, Edward and Fred. Hanlon, New York City.
No. 86,856, Joshua Monroe, New York City.
No. 86,906, John C. Cline, Assignor to himself and Wm. Andorf, Philadelphia, Pa.
No. 87,033, Samuel F. Estell, Richmond, Ind.
No. 87,204, Chas. H. Robinson, Bath, Me.
No. 87.205, Isaac Samuels, Marysville, Kansas
No. 87,225. John A. Topliff and George H. Ely, Elyria, Ohio.
No. 87,245, Andrew Christian and John Reinhart, Assignors to said Christian, New York City.
No. 87,290. John Reinhart, Assignor to A. Christian, New York City.
No. 87,355, Frederick Myers, New York City.
No. 87,579, Wm. McKerahan, Pittsburg, Pa.
No. 87,596, M. B. Stafford, New York City.
No. 87.630, Jabez Burns, New York City.
No. 87,713, L. W. Serrell, Assignor to Robert Foulds, Passaic, New Jersey.
No. 87,769, Franklin B. Gardner and John Trageser, New York City.
87,936, N. W. Hubbard. New York City.
87,999, Calvin Witty, Brooklyn, New York.

RE-ISSUE.

No. 36,161, Stephen W. Smith, Assignor of P. W. MacKenzie, New York City, dated Aug. 12, 1862; re-issue, 3,319.

◆

NEW ADVERTISEMENTS.

AYRES, LIPPINCOTT & CO., No. 49 North Third street, Philadelphia, who rank among the leading firms in this city, keep constantly on hand a complete stock of goods in the carriage line, and claim that their facilities in the purchase of goods, in large lines, often enables them to sell below dealers' and manufacturers' published prices. They occupy a spacious building, and their store room is one of the handsomest and most systematically arranged of any in this city. Those who favor them with their patronage may rely on being promptly served with first-class goods.

MATTHIAS SHOEMAKER, manufacturer of all kinds of elliptic, coach and platform springs, 1439 Hutchinson street, between Ninth and Tenth, are prepared to furnish the trade with one of the most important parts of a first-class vehicle, viz: springs, from the best English brand of steel, warranted. Mr. S. having had ample experience in their manufacture, we would recommend his goods to favorable notice.

S. N. BROWN & CO., of Dayton, Ohio, who have established an enviable reputation in the manufacture of wheels, and in the quality of hubs, spokes, &c., which they keep on sale, have engaged also in the manufacture of velocipede wheels. See their advertisement on the colored leaf in the front of the JOURNAL. They promise the best wheels in the market, at reasonable prices.

R. M. BRINTON & CO., Philadelphia Axle Works, 219, 221, 223 and 225 Levant street, manufacture all sizes and descriptions of carriage, coach and wagon axles and springs, and are the sole manufacturers in the United States of steel axle-boxes. They use only hammered iron in axles, and English steel in springs. The spindles of case-hardened axles are steel-converted. They make velocipede or any style of axle to order, and warrant all goods perfect. Your *orders* will be *promptly* filled, as they have a full assortment of goods always on hand.

THE LAWRENCE JUMP-SEAT, patented October 8th, 1867, is an improvement in the manner of constructing the front seat, for jump-seat buggies. Having seen this seat in its operations on a finished carriage, we do not hesitate to pronounce it the most convenient, as well as the neatest in appearance of any we have noticed. It was originated at Lawrence, Mass., and bears the name of that enterprising city. We would advise builders to give this more than a passing notice.

CASPER DISSER, West Union, Adams Co., O., advertises a patent shifting rail for buggy seats, patented Sept. 10th, 1867. He claims it takes less work than any other rail, and that it can be taken off and put on in a minute, and that it will not rattle or move.

We have only seen the drawings. They convey the idea that it is a very neat and serviceable rail. Read his card in the back of JOURNAL.

GEO. W. WATSON & CO., carriage makers, No. 825 North Thirteenth street, Philadelphia, now offer to the public their improved shaft and pole coupling, patented by Geo. H. Gardiner, who is a practical carriage maker and a member of the firm. They have fully tested the coupling on their own work, and, therefore, do not offer it as an experiment. See their advertisement, with accompanying cuts of the coupling.

SMITH'S PATENT METAL JAPANNED POCKET, a cut of which can be seen in his advertisement, has been in use for some time, and has its advantages over those made of leather, in that it is neat, makes a better finish, and, being made of tin, it keeps its form. Mr. Peters, the present proprietor, designs manufacturing bent ones, suitable for curved stays. Each gross will contain one-third part of those designed for curves. The builder will find it to his interest to use them, as they save time, labor and cost.

POST, HERKNER & CO., No. 19 Park Place, New York City, manufacturers of odorless rubber enameled cloth, we are pleased to number among our new advertisers. Having sent a sample of their goods, we are enabled to testify to the quality of the same, and to the fact that the gum is thoroughly deodorized. These goods are preferable in many instances to the enameled cloth, not being so liable to peel or crack. The great objection to the use of rubber cloth, especially in warm weather, has been an unpleasant odor; that having been overcome, the carriage-maker may now use it with success. We bespeak for them a liberal patronage.

W. ATKINSON & CO., dealers in transfer carriage ornaments, No. 1270 and 1272 Broadway, New York, keep a good assortment of goods in their line, and are prepared to furnish the painter with carriage ornaments, scrolls, landscapes, &c., suitable to carriage, omnibus and other work. Don't pass over their advertisement in the JOURNAL.

WM. HOLDSWORTH, carriage body manufacturer, corner of Twelfth and Cherry streets, Philadelphia, is prepared to furnish bodies to the trade on very reasonable terms. Being a good work-man, persons may rely on obtaining substantial as well as stylish work.

BUSSER & MILLER, carriage makers, Sidney, Ohio, have an improvement in top joints, to prevent the leather from sinking in between the two back bows. We have not seen the joints in operation, but feel satisfied that it is an improvement which will arrest the attention of builders throughout the country.

In addition to our new advertisements, we can point with no small degree of satisfaction to the old ones which are in this number greatly enlarged. Scott & Day; C. D. Thum; Felton, Rau & Sibley; Janentzky & Co.; and J. W. Queen & Co.; having derived substantial benefits from their former patronage of the JOURNAL, prove their faith by their works, in the enlarged space they now occupy.

It is not only proof that the investment has paid *them*, but also an evidence that they have furnished good goods, and dealt fairly and honestly by our subscribers.

OUR PRICE CURRENT.

A certain cotemporary, disposed to try and bring our quotations into disrepute, inserts a short article from one who signs himself "A Dealer in Carriage Materials," but we presume in rather a small way at the present time; for since the JOURNAL has been publishing a true and reliable price current, coach-makers have had their eyes opened to the fact that this "dealer" (or agent) has had his quotations made up with a view of receiving a heavy per cent. on the orders that pass through his hands. If he expects to secure his lost custom by the following article, we think he will be mistaken. Hear him:

> "Copy the price current of a cotemporary, get a second-class merchant to revise it, so as to be lower in price with your reports than a decent retailer can afford to sell--*the same being* wholesale prices for first-class goods—then if you have sufficient "brass" go about town and solicit advertisements. This has a tendency to bring all the trade to *your* store. The only difficulty in this matter is, some merchants "*will* not see" any benefit from advertising in *such* journals as promise to undersell them in their own market, and so may possibly *show you out of the door* with a flea in your ear."

We think the above a better endorsement of our price list than much we might add in its praise. Our quotations are *cash retail prices*, and we doubt not any regular "Dealer," (not agent) either in New York or Philadelphia, would gladly sell at our quotations.

We would therefore advise all coach-makers, who do not already take the JOURNAL, to subscribe at once, for we expect to continue publishing our price current as heretofore, giving the lowest *retail cash prices*, and although corrected by "*second-class merchants*,"(?) we are not ashamed to let our readers know who they are, and judge as to the "second-class" insinuation. We do not want our readers to be deceived by the indefinite quotations of a five-dollar publication.

Neither do we claim an over supply of "brass," but we have a little left yet, and feel that it is no disgrace to prosecute whatever business we are engaged in with energy, even though we should sometimes find those wanting in common civility. There are some merchants that "will not see" the importance of advertising in this or any other publication, but if "Dealer" will take a glance at our advertising columns he will see that *some* consider it to their advantage to do so.

We hope that "Dealer" (or agent) will write us up another advertisement, for that is the only way we can hope to have a notice of our price list inserted in the "*Coach-Makers'*—What is It?"

☞ A few more of our latest edition of OFFICE CHARTS left. Sent post-paid on roller for $1.

Fashion Plates Explained.

THREE-SPRING FOUR-SEAT EXTENSION TOP PHÆTON.

PLATE 25.—DIMENSIONS: width of body and seat, take 3 feet 8 inch bows; body having 1½-inch side bevel. Mouldings: 5-16, half diamond shape. Hubs: 6½ by 4⅜. Back band: 3⅝; front band: 3⅛. Spokes: 1⅛ by 13-16. Tire: 1 by ¼, steel. Depth of rim: 1¼. Axles: 1¼. Front spring: 1½ inches, 5 plates, 37 long, 10 open. This spring requires heavy steel to give stiffness sufficient for back springs. Back spring: 1½ inches, 37 long, 4 plates, 9½ open. Front axle, arched, 1½ inches, with bed. Back axle, arched, 2 inches, without bed. Perch secured to axle by a solid socket, giving a lighter and more pleasing effect. Wheels: 3 feet 4, and 4 feet. Track: 5 feet.

TRIMMING: Drab or gray cloth.

PAINTING: Body, seats and panels dark brown, (mixed of Vandyke brown and burnt sienna.) Seat skirts: striped fine line gold. Carriage: color same as body, with broad line of black, centered with gold, and edged with fine line of light brown, (mixed of burnt sienna and yellow.) Front of spokes filled in with light brown, centered with black, and edged with fine lines of gold.

MOUNTING: Silver. Door handles: one ball octagon handle. Lamps: silver, gold finish inside. Bands: open rimmed, silver plated on the inside and front edge, plated face, plate nuts capped. Handle of front seat rail plated, octagon singletree tips.

FRENCH CABRIOLET AMERICANIZED.

PLATE No. 26.—A very handsome vehicle, with a portable rumble, which, when removed, and the cross-straps are attached, gives an entirely different appearance to the carriage. ROUSE'S (of Philadelphia) improved bent bed, is to be used on the carriage, the advantages of which are set forth in the subjoined explanations. The wings sweep with the body, which, with the raking sweeps and lines of the body, combine to make this a dashing turnout.

For construction of body, see D. Board's Department, Part 8th, of this No.

The child's seat is supported in its position as represented in the drawing, by the following ingenious device:

CONSTRUCTION OF CHILD'S SEAT.

After the seat frame is completed, a corner-plate, ⅞ in. wide by ¼ in. thick, is screwed to end of seat-frame, turning the back corner and running six inches on the edge. At the back corner of edge-plate a 5-16 in. pivot is inserted, which plays in a socket-plate screwed to the inside of rocker. There is also a stop forged on the socket-plate, projecting half an inch, which forms a bearing, and supports the seat when down. To save the trouble of after-alterations, it is best to make a wooden model for the smith to work by.

The *seat-rail* folds in by means of stump joints at the top of seat frame, which allows the seat to be folded up and locked.

THE RUMBLE.—This rumble is intended for only one person. It has a round corner and swelled back; seat panel with round corner and swell back, constructed with inside frame-work; side panels running quartering; back panels perpendicular. Should be a toe-rail attached to front of rumble.

The rumble is set on two bars, with puncheons in centre; both bars and puncheons are plated underneath, all connecting. It is bolted to the bars by inserting a collar between, and stayed underneath, on each side, by iron braces.

The rumble may be removed, and cross-straps attached.

DIMENSIONS OF CARRIAGE.—Hubs: 7 in. by 4⅝. Front band: 3¼; back, 3⅞. Spokes: 1¼. Tire: steel, 1 in. by ¼. Front axle: 1⅛; back, 1¼, arched 2½ inches. Springs: 1½ in., 39 long, 5 plates, 12½ in. open. C. springs same number of plates and same width.

When a rumble is used, the under back spring requires heavier steel.

J. G. ROUSE & Co.'s improved bent bed should be used, which throws the body bolt eight inches in advance of centre of axle, bringing the front wheel, in turning, nearer to the centre of arch, admitting of a more compact and stylish boot.

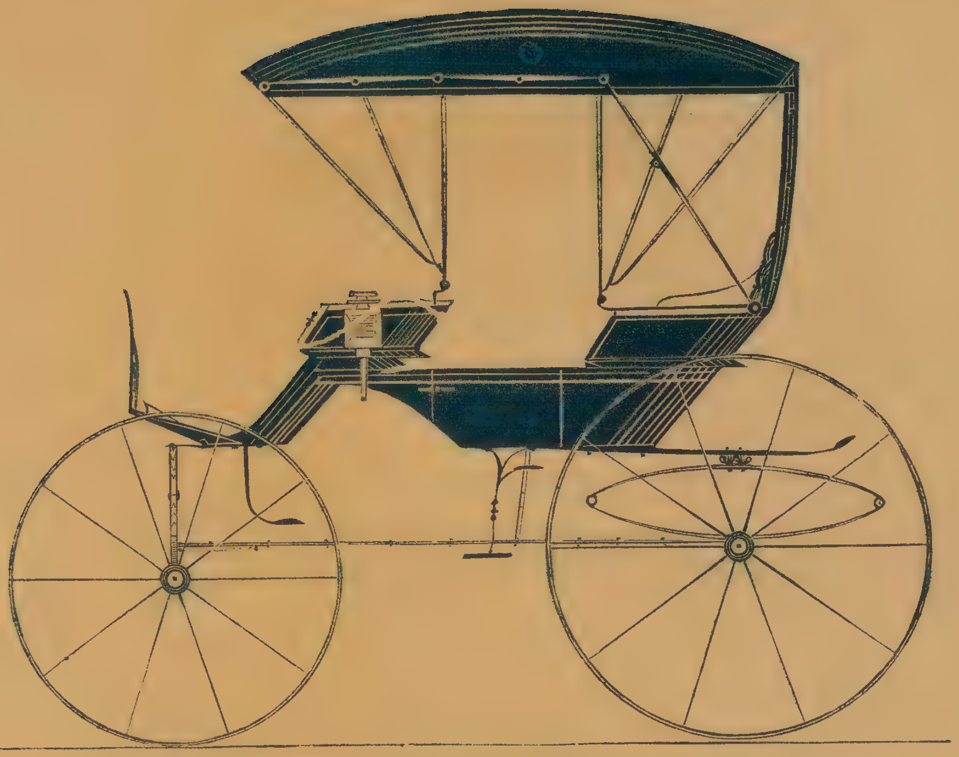
Wheels: 3 ft. 4 in., and 4 ft. 11 in. Track: 4 ft. 11 in.

TRIMMING.—Blue reps. Carpeting to match, with a border.

PAINTING.—Body: panels, clear ultramarine blue; mouldings, eighth line of gold; carriage, purple, mixed of lake, ultramarine blue, and white, with a half inch broad line of black, centred with an eighth line of gold.

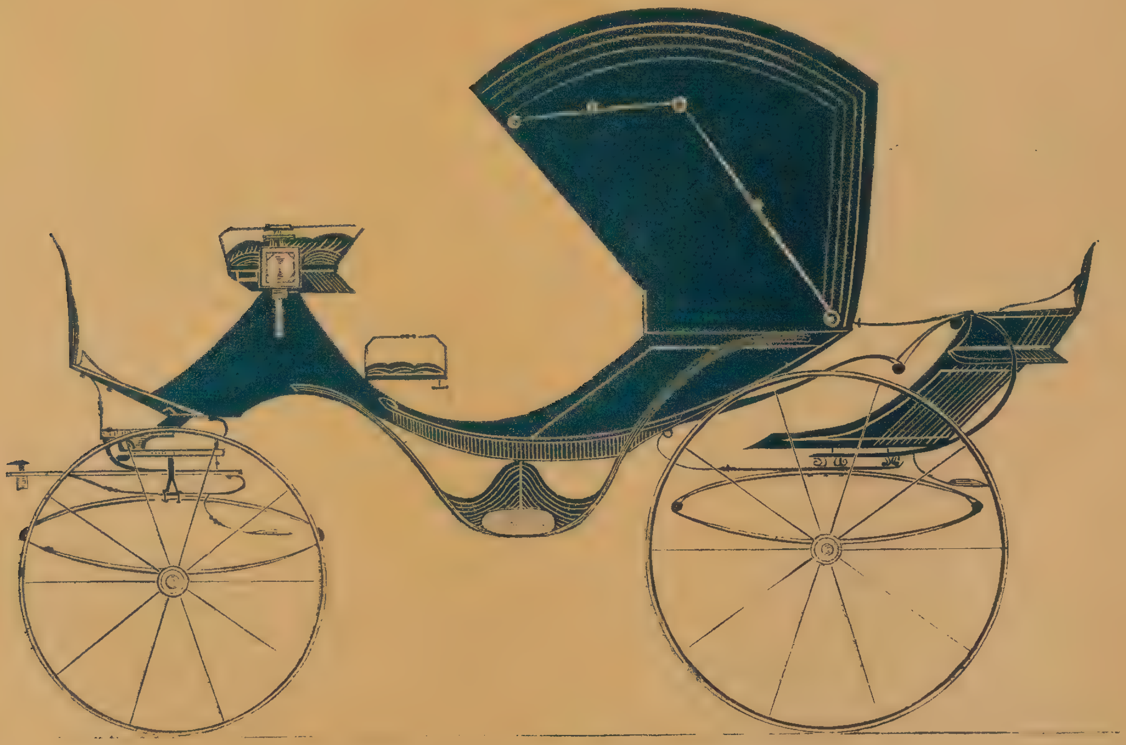
RUMBLE.—Panels painted same as body, or, plain black, and striped with broad and fine lines of blue and gold, or purple and gold.

MOUNTING.—Child's seat handle, diamond ball pattern; face-plate to hubs and pole-crab, gold.



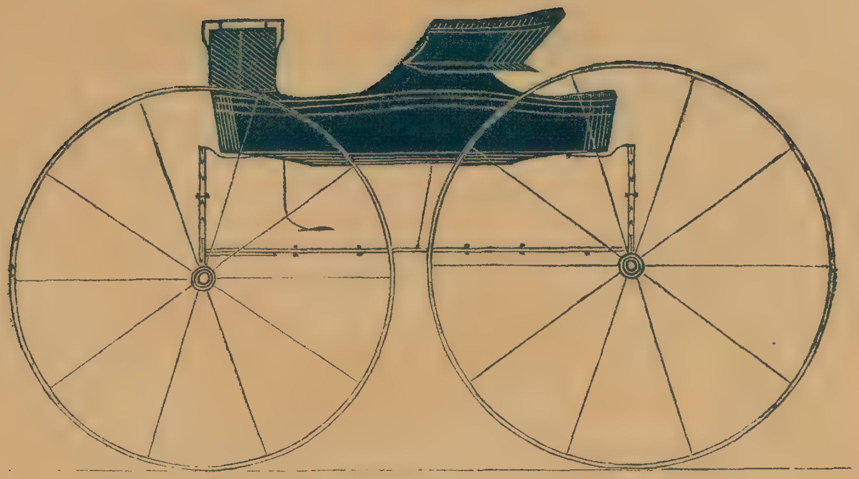
THREE-SPRING FOUR-SEAT EXTENSION-TOP.

Plate No. 25.—Half-Inch Scale.—Explanation on Page 102.



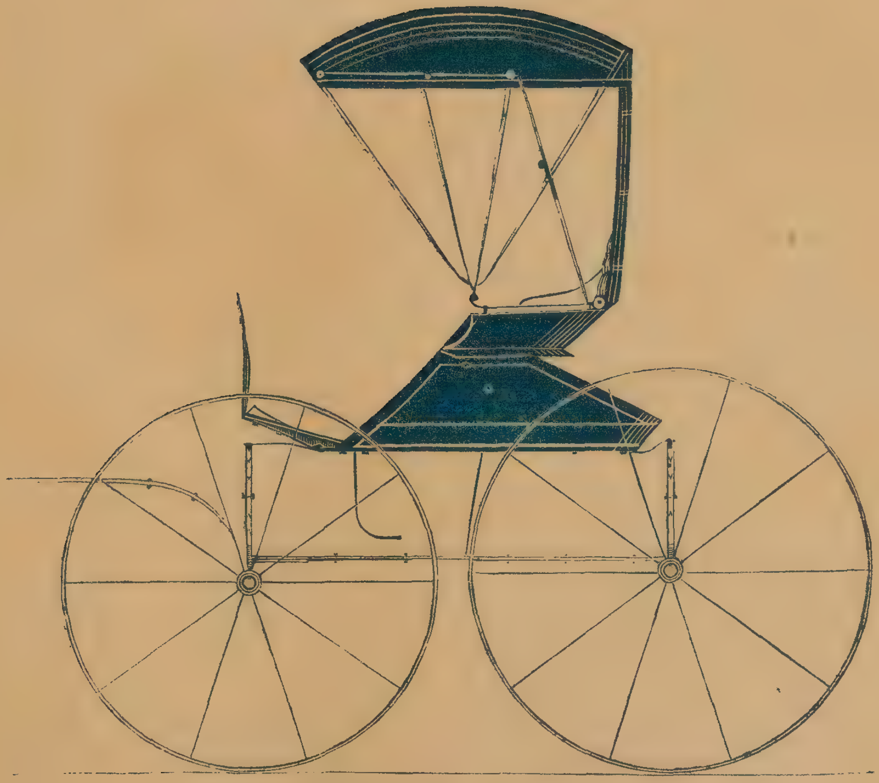
FRENCH CABRIOLET, AMERICANIZED.

Plate No. 26.—Half-Inch Scale.—Explanation on Page 102.



DEXTER BUGGY.

Plate No. 27.—Half-Inch Scale.—Explanation on Page 103.



VELOCIPEDE BUGGY.

Plate No. 28.—Half-Inch Scale.—Explanation on Page 103.

DEXTER BUGGY.

Plate 27.—This plate is similar to a buggy we saw in a first-class manufactory in New England. We are satisfied that it cannot fail to please the eye and find ready sale. We have given the body partly in perspective, in order to show the dash, and carry out the lines on the round corners.

Dimensions.—Width of body: 20 inches seat for half size, 26 inches for three-quarter, and 30 inches for full size. Concave rocker: 1½ inches thick, beveled from inside to top edge to 1⅛ inch. Top edge of panels lightened inside to show a thickness of ¼ of an inch. Back of body open. Back corner of side panels ½ inch deeper than front. Raised belt, ¾ of an inch from top edge, and one inch wide. For half size hubs: 6 by 3⅛. Front band: 2⅛; back band, 2½, Spokes: ¾. Tire: ¾, No. 12 steel. Axles: ¾, steel. Springs: 1¼, 3 plates 26 inches long, 9 inches open.

Wheels: 4 feet and 4 feet 2 inches.

Trimming.—Brown French morocco, black patent leather welt. Rug to match, with border.

Painting.—Body, seat and panels maroon, lake or brown, mixed of burnt sienna, Vandyke brown, and lake sufficient to tinge it, or, leave out the lake altogether. Belt: green, emerald or verdigris, glazed on Malori green. Mouldings: striped gold. Carriage: brown, a shade lighter than the body, striped ⅛ line of a lighter brown. Fronts of spokes: green, edged gold.

Mounting.—Gold.

VELOCIPEDE BUGGY.

Plate 28.—A genteel, light-top buggy, with coach front, moulded off very plain; deck panel behind.

Width of seat, 30 inches, inside of panel top of seat frame, to take 3 feet 6 or 7 inch bows. Slat irons: wrought. Philadelphia pattern: which makes a light and neater finish than the leather bow socket. The back slat iron to extend up the back bow twenty inches, to strengthen it, preventing the bows from being easily broken in the operation of throwing the top down.

Dimensions.—Hubs: 6 inches by 3½. Front band: 2⅜; back, 2⅞. Spokes: ⅞. Axles: ⅞, steel. Tire: ¾ by ⅛. Springs: back, 38 in. long, 3 plates, 1½ in., 9½ open; front, 37 long, 3 plates, 1½ in., 9 in. open, of lighter steel than back one. Beds arched, with double perches.

Wheels: 4 feet and 4 feet 2 inches. Track to vary according to the locality.

Painting.—Body, seat and narrow panels, purple. The pointed stripe on the sides of body, gold. Mouldings: fine line gold. Carriage: black, striped three fine lines of purple, the centre one to be the heaviest. Front of spokes: gold, and gold stripe on the front and back of hubs, as a centre line.

Trimming.—Gray cloth, patent leather welt, with "grecian bend" style of drop-back. Carpet, with border to match.

Velocipede Wheels.—See colored page advertisement.

Correspondence.

☞ We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.

For the Coach-Makers' International Journal.

SETTING AXLES.

Butler, Ill., February, 1869

Mr. Editor:—In your issue for January, page 56, a question is asked by the editor in the Wheel Department of the editor in the Smith Department, the answer of which involves one of the most important principles in mechanical science, to wit: "I should like V. Ulcan to inform me and my brothers of the hub fraternity, as we are much concerned, why it is that, as a general rule in setting their axles, that they give their wheels 5 inches flare, or that much wider on the top than they are on the track, and what is the rule governing the setting the axle?"

Now, the answer to this question requires a course of reasoning derived from geometrical mathematics, which for more than two thousand years, since the time of Euclid, has been reduced to a certain point from which there is no deviation or improvement to be made. These everlasting truths, the product of giant minds in giant ages of science, which of themselves are so easy to comprehend, are as much disparaged by the present age as Vulcan the god is by V. Ulcan the editor. Hence, our science, which should be our everlasting heritage, has dwindled down to—what shall I call it—well, say falsehood. Travel the country over and inquire of smiths and wagon-makers, and three-fourths will tell you: I set my wheels on a "plumb spoke," because the philosophy of such construction is so apparent that their wagons would not sell without that reputation. How do you do it? Oh, that is a secret that I must keep to myself, or else my neighbor over the way will be on an equal footing with me. Step across the way and inquire of the neighbor alluded to, and he will tell you the same thing in substance as the one you have just left. That secret is bound to be kept from the one-fourth minority most surely. It is as safe as Hotspur's secret that Shakspeare tells about, when his young wife was importuning him to impart it to her on a promise not to tell it again. He says: "What, Kate, I believe thou art discreet, and will not tell that which thou dost not know." (Quoted from memory.) On the same principle mechanics do not tell what they do *not know*.

In the course of business I have a great many correspondents on this subject of setting axles. They are from all parts of the country, but less from other parts than from the great manufacturing cities of the East. This would argue to one who was unacquainted with carriage literature that in such places they stood in no need of such things. It takes the question of "Spoke Shave," on page 56, and the answer of "V. Ulcan," on pages 74 and 75, to undeceive them on this point.

The question first implies that a certain fact exists, to wit: carriage wheels are made to run 5 inches wider on the top than at the tread, and further on in the next number he tells us they ought to be made with about one-half inch dish. V. Ulcan tells us that the spoke on the under side of the wheel should stand plumb. The geometrical result of the two propositions would be that the wheels should run 2 inches wider at the top than the bottom or tread. But they say they run about 5 inches wider. If that fact exists, with one-half inch dish to the wheels, the carriage is a worthless thing compared with the one whose axles are set right, and we all know that a great many otherwise well-finished carriages are worthless on account of their hard draught.

My testimony to the existence of the above assertion of "Spoke Shave" is, that I have measured hundreds of carriage wheels manufactured East, and that I have never found *an instance* where the geometrical proportion that should exist between the dish, the top and tread of the wheel, existed. The same may be said of the West, except in such cases where they have worked on the principle of geometry, which admits of no failure.

Let us now examine V. Ulcan's proposition to remedy the defect. First, as to the dish of the wheel, he tells us, (page 75,) to get the proper dish of the wheel, to "divide the length of the spoke, from the outside of the hub, into eight equal parts; one of these parts gives the required dish." Well, this is plain. Suppose the spoke is 24 inches long; 8 is in 24 three times; therefore, 3 inches is the proper dish for a nice carriage wheel.

His rule for setting axles is equally questionable. He says: "Divide the length of the arm into eight equal parts, and bend it the eighth part of the length." If the arm is 8 inches long, it must pitch up or down (he does not say which) one inch.

Unintentionally I am bordering on the ludicrous, that is disgraceful in any argument, and as an apology I will say that V. Ulcan did not intend to write what he did. He was called on to write on a subject that is *pre-eminently* abstruse, and yet is called a common-place thing that everybody understands. He entered upon it as any editor must, at haphazzard, and because he failed, it is no sign that he is deficient or that his article will do no good. On the contrary, it will be the means of solving the problem, and giving self-conceited manufacturers a knowledge of the weakness of the reed on which they leaned. That is more than years, by the present writer consumed in writing essays on this same subject, has been able to effect.

A few days since the same kind of a question was submitted to a professor, who has sometimes written for the Journal, and who is at the head of an academy where the rising generation are taught practical, ornamental and other accomplishments. It read as follows: "Two wagon wheels that are 5 feet in diameter, measure 25 inches from the outside of the hub to the outside of the wheel, have a dish or concavity that measures on the outside of the hub to one ⅞ of an inch, and the other ⅝ of an inch. The axle boxes, which are 12 inches long, measure 4 inches diameter at the large end, and 3¼ inches at the small end. How much above or below a horizontal line must the axle arms pitch on the under side to hold the concave sides of the respective wheels vertical on the under side of said dish when the wagon stands on a level?" The professor received this problem by one of his scholars just before the recitation of the geometry class, and with that pomposity that some pedagogues know how to assume when they think they know it all, stated to the class that a question had been handed in for his solution, and proceeded to read it. Unfortunately, the practicable attainments that we have been *told* he is possessed of, failed him at this moment, when he most needed it, and with it his temper. First, he defied anyone to prove that it was a question in geometry. Second, under the circumstances it was best not to pay any attention to it. Third, the writer reminded him of a man he once knew that was a fool. This last remark brought a general roar of laughter from the class; but the most hearty laugh came from the ones who had laid the plan to give him a stumper.

The question is simply a question about the proportion of the angle of the dish to the wheel compared with the angle to the taper of the box. If the box has no taper, the axle-arm will pitch downward precisely as much below a horizontal line as the angle to the dish is, in order to hold the under spoke plumb; but if the axle-box has a taper, just the amount of the angle to the taper must be substracted from that downward pitch, and allow it to pitch downward on its under side only as much as the angle of the dish exceeds that of the taper to the box. If the taper to the box exceeds that of the dish, it must pitch above a horizontal line just to the amount of that excess; and if the two angles are equal, the axle-arm must be horizontal on its bottom part to hold the wheel on what is called a plumb spoke. Equal angles are desirable, for one reason, which we mention, that is: the oil that lubricates them has not an equal chance to run out at the shoulder or point that it would have if the axle-box formed an incline either way.

Now, it is self-evident that this question is purely geometry or trigonometry, (either of the sciences of which the writer is not well enough acquainted with to draw a distinction,) and the professor should have answered, or honestly admitted that he could not do it. The answer would be of no practical use to the mechanic, as he would have worked it; because, if capable, the mechanic could not spend the time to solve the problem for his axles until his customers are educated up to the stand-point to appreciate and pay for the extra labor that it would require. But still the truth that it is a question capable of mathematical solution is of inestimable value. Starting out with this fact as a base for operation, the writer undertook the task of bringing the problem within the reach of solution by the learned or unlearned mechanic, and has succeeded so that either one or the other can solve it practically in twenty seconds. Not only that, while he is solving it, the device is so arranged that in the same time he is doing it a pattern forms itself, so that he is ready to apply it as a guide to set both arms of the axle to. HENRY HARPER.

For the Coach-Makers' International Journal.

THREADS FROM THE MEMORY OF AN OLD CUSHION.

BY FRED. PUMICE,
Author of “STRAY STEPS,” &c.

CHAPTER IV.

Continued from page 87.

The stern-wheeler we now found ourselves on board of was called the “Rocket,” and her captain, to keep up with the spirits of the times, had hoisted the new Confederate flag on his boat, as well as a large canvas banner, with the motto: “*Virginny out, and may she never tire*,” and this was greeted with cheers at every landing place, and by whistles of recognition from other boats as they passed.

I felt very sorrowful at all this, as well as at the position I found all my friends in, and as for Tim Dunigan, for the first day after leaving Magnolia, he had not a word to say, but sat moping and silent, with his face between his hands, scarcely moving, except to go up and inquire how the Madam was, and this he done every hour, until night, when he came and sat down on me, and that made me feel better, and then he commenced to talk to himself: “Ah! thin its little I thought whin I kem down this big river to Magnolyah that its this way I'd be lavin it soon. 'Twas a sorrowful day for us that iver she met the Colonel; altho' he is a nice and good man, but why the divil did'nt he shtick to his wife and me, and let the blakguard rebels go and fight, av they wanted to fight? What the divil does he want, or they want to go to war fur the naygurs fur? My plan wud be to make the naygurs fight for themselves, an av they wud'nt, thin bedad I'd sell 'em, and take meself and me wife off to Ireland, where they'd be no fightin an I'd take it aisy, so I wud.”

He was here interrupted by one of the deck hands, who asked him if that was his *gray horse*. Aye is it, said Tim, and what the dickens have ye got to say about him. Don't say a word agin him, me boy, av ye know what's good fur ye; altho' that same gray is the cause uv all me trouble. Yis, bad cess till him, av he had'nt run away onest I wud'nt be in this bother now. That's what I was a going to say, said the deck hand. I always make sure to have trouble aboard a boat what has a *parson on a gray horse* on her. You'll see if we don't have something go wrong afore we get to New Orleans on this trip.

“Wood pile! wood pile! come, turn out there,” interrupted the conversation at this point, and I saw the boat was coming up to a *landing*, for the purpose of taking on wood. This “wooding up,” as it is called, is done in double quick. As soon as the boat is made fast the wide gang-plank is run out, and the deck hands, black and white, go ashore at a run, and up the bank to where the wood is piled up in great heaps, 4 feet (one cord) high, and go at it, piling the great sticks of cotton wood on to one shoulder as high as they can reach it with their hand to steady it, and then a trot back to the boat, where they pile them again in front of and around the boilers, then back again at a trot to the wood pile—one gang going out as another is coming in—while the mate stands at the gang-way with a big cord-wood stick in his hand, swearing like he had learned how *by note*, as they learn music; again yelling out, “come! come! wake up there! going to keep us tied up here all night? come! come! hurry up with them shavings—pile up them chips.” *Honest*, every stick was over 4 feet long and 12 inches in diameter, and those deck hands carried every time from 6 to 8 sticks. “Come, travel! walk lively there! you lazy son of a sea cook!” and if a single word in reply came from any of those deck hands, whack! he'd get with the big stick held by the mate. This same mate's whole occupation seemed to be to drive the poor men, and his delight appeared to be in cursing them, and abusing them.

Some fearful scenes take place on those boats at times, when they happen to carry a more than ordinarily brutal mate. Some of the men, driven to desperation, attempt to resist his abuse of authority; the deck hand, perhaps supported by one or two others, makes a reply to the effect that, “we are doing our best,” and “you better mind yourself.” The chances are he is knocked down, likely, with a stick of wood; the others interfere, the mate draws his revolver, (he is never without it,) and probably shoots one or two of the hands. The natural result is the men “lay for him,” as they call it, and if they get a good chance he is shoved overboard at night; or, again, when they reach New Orleans, they get a chance at him, when he least expects it, and he is found by the police somewhere along the levee stabbed or shot dead, by no one knows who and very few care. This class of mate is not quite as plenty as in former days and they are getting every day, happily, more scarce. A better and more humane system is getting into the river service. Why, the life those deck hands used to lead tended to brutalize them, and harden them to all the better feelings of humanity. Their mode of life was one of constant toil and hardship while on the river, and one of constant beastly indulgence and maddening intoxication while ashore. While on board they had no comforts and no conveniences, sleeping wherever and whenever they could get a chance, there being no accommodations for them, as in northern steamers or ships, and being constantly disturbed from their rest by the hoarse shouts and curses of the mates, with their ever-recurring “wood pile! wood pile! turn out there,” or “freight pile! freight pile! wake up! —— your eyes,” as they passed around among boxes and bags and loose freight and bales of cotton, hunting up the poor tired men, and waking them up with a kick or a blow. And their mode of taking meals was at stated hours, if not engaged loading or unloading; the deck hands' cook sung out, “grub pile! grub pile!” Everything was a pile, and word was passed around the boat, the men coming to the cook house with a tin cup for coffee, and, perhaps, a tin plate on which they received a chunk of beef or salt pork, and as many hard biscuits as they needed. Then they squatted down, wherever they could get a chance, and bolted it, if they were not disturbed by the unwelcome cry of freight pile! freight pile!

Just as we left the wharf boat, at a place called Donaldsonville, at the mouth of the Bayou Lafourche, a boat came out of the Bayou bound down like ourselves, and immediately a *race* began, which ended disastrously.

Soon both boats were going at their best speed, and they kept very close together. When a landing was necessary for either one of them, the boat swang around rapidly, touched the landing or wharf boat; the gang-plank was run out, the passengers or freight rushed on or off, the head line cast off, and away again. The excitement soon reached the passengers, and then the firemen and crew; every thing combustible was “piled” into the furnaces to drive the boat ahead; the *wheel* flew around so fast that the jar of it “shook,” every joint of her; the other one was alongside so close that you might have easily jumped from one to the other, while occasionally, when one or the other forged ahead a little, the passengers would taunt those of the boat behind with such expressions as, “good-bye, if you have any word to send to the city, we'll take it.” “Why don't you run that old tub ashore and grease her bottom.” “Take her on the dry-dock and scrape the cat-fish out of the cracks in her side.” “Why don't you let her go ahead;” these and the like had the effect of half crazing our folks. The captain came down and ordered the engineers to fire up. We are doing so, they answered. “She's got all the steam that's safe.” “—— the safety, don't you let that boat keep ahead of us.” “Pile in them sticks and if they don't do, shove the heads of them pork barrels in, and fire up with the pork.” This was soon done, and our increased speed was such that we soon passed the other boat, amid the cheers of our crew and passengers, but in an instant their cheers were changed to groans. A shock, a scream, an explosion, and all that was life and hope was a mass of ruin and fire. I found myself in the river, floating with the current; but what had become of the “gary and buggy, and my friend Tim and our young lady.” The Lord help the poor Colonel, his young wife was never heard of. The explosion was such a destructive one that the boat was actually blown in pieces; scarce a dozen persons were saved, and they burned and scalded, more or less, were picked up by our antagonist in the race, who, truth to say, done all they could to save our unfortunate people.

For my part I found I floated easily and lightly, and soon saw I was in no immediate danger; but I felt awful at the fate of my friend Tim, and worse, I had a great looseness. I seemed to have something wrong with my system, for although “a cushion,” I had my feelings. I soon discovered that my middle *button* was missing, and the water dripping to my inwards, through the button-hole. I was soaked through, and was afraid I'd sink, but another danger was there also; a repulsive, fœted breath puffed against me, a long, dark scaly nose pressed against me, a huge, yellow mouth opened and then shut on me, a double row of horrible teeth closed on me, my very stuffing was pierced through—you can see the marks now "Mr. Pumice"—a horrible alligator had seized me, but I was too tough for even him; he let go of me. I floated on, and all night I was alone in the cold river.

As morning dawned I was nearly opposite *New Orleans*, and at Carrollton I could see soldiers by the river side, performing their ablutions. As I neared the shore, one fellow sung out: "boys, I'm blamed ef thar yaint sumthin' I want. I'm going fur it." He took off his clothes, plunged in, seized hold of me, tooked me ashore, looked at me, and then hollowed out: "boys, I'll be doggoned ef that ar don't make a bully pillow." He dressed, took me with him to his tent, and I found myself in the Confederate (rebel) army.

Mr. Fred, I had lost my "first button;" I felt bad, because I was a Northern cushion and *loyal*, but my new owner was actually delighted.

How I lost my next button, I will tell you to-morrow. Quick! shove me under the bench! old *sorrel top* is coming up, and I don't want to get swept out until I finish my history.

(TO BE CONTINUED.)

For the Coach-Makers' International Journal.

SETTING AXLES.

NEOSHO, WIS., February, 1869.

MR. EDITOR:—I am a constant reader of the COACH-MAKERS' JOURNAL; think I cannot get along without it. I get a great deal of valuable information from its pages, but cannot agree with all that I read in the JOURNAL.

In No. 5, of the present volume, V. Ulcan's theory of construction is, in my view, wrong in several points, especially as to the dish of wheels and the set of axles. It is so much at variance with my ideas in regard to the same, that I will endeavor to give my plan, which I have found from experience to work well; and in doing so, I shall give my own experience on the subject for the past twenty years.

First, the dish of wheels. I have found that a wheel with but little dish, say one-fourth or one-half inch dish, is the best—just enough to keep the wheel in its place, for a perfectly straight wheel will soon turn back and be comparatively worthless. The rule laid down in the article referred to, would give a 4 feet wheel over 2½ inches dish, which any practical wagon-maker of the present day will say is altogether too much.

Second, the pitch of the axle. When I learned my trade, I was taught to make a wooden axle straight on the under side, also to give the arm one-fourth inch gather. After working for myself a few years, I became satisfied that I could improve on the old plan. I took a wheel after the boxes were set, and placed the centre of the tire on a three-cornered file, placed on the floor. I balanced the wheel on the file, and fastened it in that position, and then drew a chalk line horizontal through the centre of the box, and then drafted my axle so as to have my wheel stand in that position when the wagon was completed, and gave the axle but one-sixteenth of an inch gather, and I found that I had a wagon that would run one-quarter easier than axles made on the old plan. I have followed that rule since, and find no trouble in getting an easy running wagon; but if my wheels had more or less dish than one-half inch, I had to vary a little from my draft.

About one year ago, I saw Harper's Axle Gauge, and I tried it with my draft, and found it to be about the same thing, with one advantage, that I could get the exact pitch with my dish of wheel. I bought the gauge, and consider it a great improvement, and worth all that it costs.

If you consider the above worth a place in the JOURNAL, please to correct bad spelling and bad grammar; if not, please to throw it in the fire.

Yours, &c.,
A SUBSCRIBER TO THE JOURNAL.

For the Coach-Makers' International Journal.

ENGLISH vs. AMERICAN VARNISH.

BUTLER, ILL., March, 1869.

MR. EDITOR:—The answer in your March number to an inquiry from Kankakee, Ill., although given in sincerity, and probably in accordance with the popular feeling, (I would say popular error,) should be scrutinized a little before men in our smaller manufacturing establishments run away with the idea that they are following in the wake of larger establishments. You say that "*We* (the editor) are foolish enough to believe that at no distant day the English varnishes will be equaled, if not excelled, by American manufacturers." Query. Do they not do that already?

It is nearly forty years since the writer first commenced using varnishes, and, as it was customary at that time, he learned how to make those kinds that are now used for coach painting, of which copal is the principal ingredient. Also to make mastic varnish for pictures. The first varnish that he ever saw made, the operator endeavored to hide from him the principle of making it. After experience in varnish making, painting and varnishing, has been nearly the same as my first lesson in varnish making.

However, unfavorable as my education was, it did cause me to pick up a little common sense, that under more favorable circumstances never would found lodgment in this noddle.

Common sense is started at once into the inquiry, why England is more favorable to the *birth* of varnish than any other spot of God's earth, as long as the same ingredients are placed into the hands of equally intelligent men, whose whole mind is bound up with their fortunes in the venture of varnish making. Perhaps the old saying will be quoted, "what everybody says must be true," as the only argument that has any weight in the matter.

General admitted truths, that are apparent to our common sense, do not want everybody's say to convince us of their truth; while falsehood needs all of that endorsement, and then, like "English varnish," it only gulls a few manufacturers of carriages in places where they are deprived of the general information and experience in the use of varnish.

American varnish factories commenced on what may be called a large scale, I think about thirty years ago, at Newark, N. J. The pioneer in the business was Smith; perhaps the same that now advertises in the JOURNAL. The Newark varnish, as it was called, was in great demand by the knowing ones in the West, and nothing but that would satisfy them. It was a great improvement over our way of manufacturing it in small quantities, and the Newark carriage-makers contributed to its popularity by the superior application they made of it to their rich and highly finished carriages.

In the like manner Boston got up its name for varnish in an early day. Stimpson, since Stimpson & Valentine, now Valentine & Co., perhaps some later than Smith, succeeded in getting their names into notoriety by the substantial and highly finished painting of carriages in Boston. These are men that I have known more about than any others, because they were my favorites. Every old painter knows the necessity of using varnish that he is acquainted with, if I may so speak it. I have used of theirs to considerable extent, and have recommended it to others of my acquaintance, and what is very singular, in view of the acknowledged fact of the many failures of English varnish, I have never heard the painter who has used it express anything but satisfaction of its quality.

No doubt the editor gives a true history when he says: "good painters have been discharged in almost every city and town in the land where a carriage is made, the whole blame of a poorly finished body being laid at their door." Yet he recommends another kind, Harland & Son's, for the second trial, by the use of which the painter may succeed in keeping in the boss' employ. Gentleman painters, I would recommend no such thing. In no case buy English or American varnish, where you have to make the purchase through a middle man. Save his percentage, and also save yourself the more than probable chance of being imposed upon by a vile adulteration. If you feel yourself in duty bound to patronize English manufacture in preference to your own country, send along enough money to pay for the first quality of gums that will come from India, and oil and turpentine that will come from America; then extra, the shippage from England back to America. Next calculate the premium on English currency, which will be thirty or forty per cent., and send enough to pay for that, to any respectable varnish manufacturer in England, and the chances will be greatly in favor of your getting *as good* varnish, and as much of it, as *one-half* the money would have bought in the United States of any of our numerous and respectable manufacturers.

But, after all, the name of importing varnish at great expense, is something to some people. If you lay great stress on a name, and are large manufacturers, you can do (I don't recommend it) as others do. Let dealers refer to you as to the quality of English varnish, which they will make appear as if you considered it an indispensable article that the first-class always use; when, in fact, they do not use one drop of it. Can it be possible that this is a fact? You have my word for it that I know it to be so in some cases.

Let us philosophize a little, and see if it is not so in all cases. Noble & Hoar and Harland & Son are the two prominent candidates, one of which, it is said, his varnish will not cause a first-class painter to be discharged from the bad work it makes. All our first class shops have to put on a finish coat of his varnish. The factories in operation in the United States that are equal and exceed his in capacity, will probably count over one hundred. Both parties manufacture for home consumption, and more or less for foreign markets. Now, if we will set aside one of our hundred factories to supply all the first-class shops with a finish coat, we will at once see that it would be insufficient to supply the demand. Now, there is another class of small factories that expect to imitate or do as they think the larger class do. They require a considerable supply, which comes to them through the express from large cities. Does the importation of English varnish exceed this demand? It appears to me that it does not. But suppose it does, and that the larger factories are supplied with a finish coat of English varnish, what in the name of common sense becomes of the immense quantities that one hundred factories make? Does it take all they make to furnish ground work for the bare exportation of one or two insignificant English factories? No one can believe it after considering all the facts in the case.

It appears that a most worthy class of small carriage factories, whose proprietors are willing to stand any expense to do justice to their customers, are made to bear all the unnecessary expense of purchasing English varnish, and then they have got to have a quarrel with an equally worthy painter, who is ambitious to equal the larger factories in quality of work, because he cannot do it with varnish that has no other attribute of goodness than a name given to it by interested parties. I have known many of the inconveniences and impositions that painters are subjected to by the know-all crochets that proprietors get into their minds about painting; and the reverse of turning the tables on to the proprietors by incompetent painters. My days of painting have gone by, yet I would like to see others advance instead of taking retrograde steps, as has been often witnessed in the various departments of arts, in progress of ages. No greater step toward advancement can be taken than to disabuse the public mind about English varnish.

HENRY HARPER.

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. I.

BY J. H. T.

TO CLEAN OIL PAINTINGS.

A thick coat of fuller's earth spread upon an old painting, and left a sufficient time to soften the extraneous surface, may be removed by washing, and leave the picture pure.

If your picture be very dirty and old, use ox-gall. Repeated application of ox-gall during several days, and wash it off each day, will clean a very old picture. If it does not clean in two days, continue it.

Another way is to make a ley of the ashes of vine-branches, mixed with fresh urine; dip a sponge in it, and wipe it over, and it will much restore the fading, &c. Or take good wood ashes, search them, and with a sponge and fair water, gently wash the picture you would cleanse, taking great care of the shadows. When you have so done, dry them well with a clean cloth.

Another method is to use a raw potato, grating it on a tin grater or rasp, so that it will have a rough surface, and used as a rubber; from time to time renew the surface, on the grater, then washing with a soft sponge.

Another way, use diluted aqua fortis, washing gradually and in parts, and continually and cautiously sponging with water. If the picture is cracked do not use it.

But this cleansing of pictures and paintings ought not to be done too often, viz: not except they are very much soiled, because too frequent cleansing of this kind will by degrees wear off part of the colors, therefore you should endeavor to preserve their beauty by keeping them from smoke, dust, flies, &c.

All pictures, but chiefly such in which mixtures of white lead are used, will be apt to grow tawny, to tarnish, or grow rusty, as may be seen in all old pictures. In order to prevent this, expose them to the hot sun three or four days in May or June; and by that means the ill color will be much drawn off, and the painting appear more fresh and beautiful. If this be done annually, it will preserve them wonderfully.

There is a very simple method to clean most any kind of paint that has become dirty, and if our housewives should adopt it, it would save them a great deal of trouble. Provide a plate, with some of the best whiting to be had, and have ready some clean warm water, and a piece of flannel, which dip into the water, and squeeze nearly dry; then take as much whiting as will adhere to it; apply it to the painted surface, when a little rubbing will instantly remove any dirt or grease. After which, wash the part well with clean water, rubbing it dry with a soft chamois. Paint thus cleaned looks as well as when first laid on, without any injury to the most delicate colors. It is far better than using soap, and does not require more than half the time and labor.

OBITUARY.

DIED.—In Chester, Delaware Co., Pa., on the 16th day of February, A. D. 1869, Mr. JOSEPH TAYLOR, in the 61st year of his age.

Mr. Taylor was born in this country; his father having came here some time in the 18th century.

Mr. Taylor served his time with his father, who was a coach-maker, and when he became of age, which was in 1829, he started a shop of his own. Here he carried on for a number of years, gaining a good reputation in his immediate neighborhood, and trying unceasingly to bring the business to a higher standard; but notwithstanding his good business, the limited state of his finances kept him back.

In the year 1842 or 1843, he built two very pretty elliptic chairs or gigs, which were shipped to Valparaiso; and being the first ever received there, they attracted a great deal of attention, and were considered as wonderful. It must be remembered that carriage making had not reached the perfection it has now attained, and there were very few who in those days could turn out a neat job. Should this article meet the eyes of any of his former employees, they will say that he was honest and upright in all his dealings.

He leaves three sons to mourn his loss, two of whom are now carrying on the coach business at his old stand in Chester.

Answers to Correspondents.

D. W. N., TORONTO, ONT.—You do not state in your letter at which branch of the trade you work. If you are a wood-worker, and pretty well advanced in the trade, you might be able to secure a place, with good recommendations, as heavy body-makers are very scarce. In the other branches there appears to be a full supply of hands.

N. B. E., THREE RIVERS, MICH.—We beg your indulgence, as your letter was overlooked, and not sent to Spoke Shave in time for an answer in the April number. It will appear in *May without fail.*

S. G. F., MILTON, ME.—"Thums' Flat, Half Elastic Varnish Brushes" are 65 cents per inch; treble filled, (extra thick) $1 per inch. These are not so generally used.

"Harper's Axle Guage" is highly recommended by those who have used it. We have not seen one, nor received a price list from Mr. Harper. Write to him.

The Spoke Tenoning Machine is a trestle, on which is placed at one end the device for cutting the tenons, near the other, clamps to hold the hub securely; the machine is worked by hand. After the spokes are all driven, the wheel is placed on a trestle, and the tenons cut very rapidly.

The Bolt-cutting Machine, (tenoning is an error,) is made similar to a pair of shears, having at the head a space to receive the nut; the bolt is cut off clean and smoothly by pressing the handles together.

The machine for making the flat tenon, and for dressing the face and back of spokes, is not on sale We wrote to Spoke Shave with reference to it, but have received no definite answer. The cost of this machine is from $15 to $25. See price list for the other machines.

R. E J., GOLDSBORO', N. C.—CALVIN WITTY, OF NEW YORK CITY, gave public notice that all the velocipedes now being manufactured were infringements on his patent, and until his broad claims are set aside, it would be unwise to manufacture them. We could not fill an order for the parts of the velocipede you desire; they are not on sale as yet.

VELOCIPEDE WHEELS —See colored page advertisement.

☞ A few more of our latest edition of OFFICE CHARTS left. Sent post-paid on roller for $1.

Pencil, Rule & Square.

D. BOARD, EDITOR.

FRENCH OR SQUARE RULE.

PART THIRD.

BY A PRACTICAL CARRIAGE ARCHITECT.

(See illustration in front of Journal.)

In our last, we left the bottom sides swept off, ready for gauging, which we will defer until having every piece prepared. We will now take up the corner pillars; after being dressed, lay the back and front pillars in their proper places, and transfer the perpendicular lines marked 1, 2, 3 and 4; also, at the same time, strike off the shoulders at the foot of the pillars, arm-rails and roof-rail. You then square them across and transfer them to the opposite pillars. You will now proceed and prick on the cant, commencing with the perpendicular and horizontal lines No. 1, at the foot of the front and back pillars, deducting the turn-under space from the cheat lines S, on the perpendicular line No. 1, and so on with all the perpendicular lines, as illustrated and described in our last in the manner of pricking off the bottom sides.

You will notice underneath the draft the four pillars, F being their faces with the outside edges up. Space from the cant to the pillars, commencing with perpendicular lines Nos. 1, 2, 3 and 4; take the space from line D to line S, on the lines F and N, being the width at the top of the pillars, which you can prick off on the pillars. With the straight-edge, from this point to the prick on cross line No. 4, draw a straight line as shown in the diagram; then turn the pillars over, prick off in the same manner, keeping in mind where the perpendicular and horizontal lines intersect on the inside of the pillar. Set your bevel from line F, on line G, being the roof-rail line; sweep your pillar off, using this bevel for the top of the pillars.

Side Elevation and Cant of the French Cabriolet Americanized.

PART EIGHTH.

(See illustration.)

This diagram represents the side elevation and cant of the cabriolet, shown on plate No 25.

You perceive we have laid out the cant below the side elevation, our object being the same as described in our last. Side elevation being correctly drawn and patterns complete, except the standing pillar pattern, we will determine the turn under, which is 4½ inches, and complete this pattern.

Measure 1½ inches from the face of the standing pillar, and draw perpendicular line A, this being the face of the bottom side. Proceed and draw perpendicular lines B and C, the extreme length of the body: also lines E and D, and the horizontal centre line. Proceed and lay out for the width of the body, which is 3 feet 11½ inches on line D; this allows ¼ of an inch each side for the upper arm rail for fastening the top to, and will take a 4-feet front bow. These bows are constructed the same as described in our last.

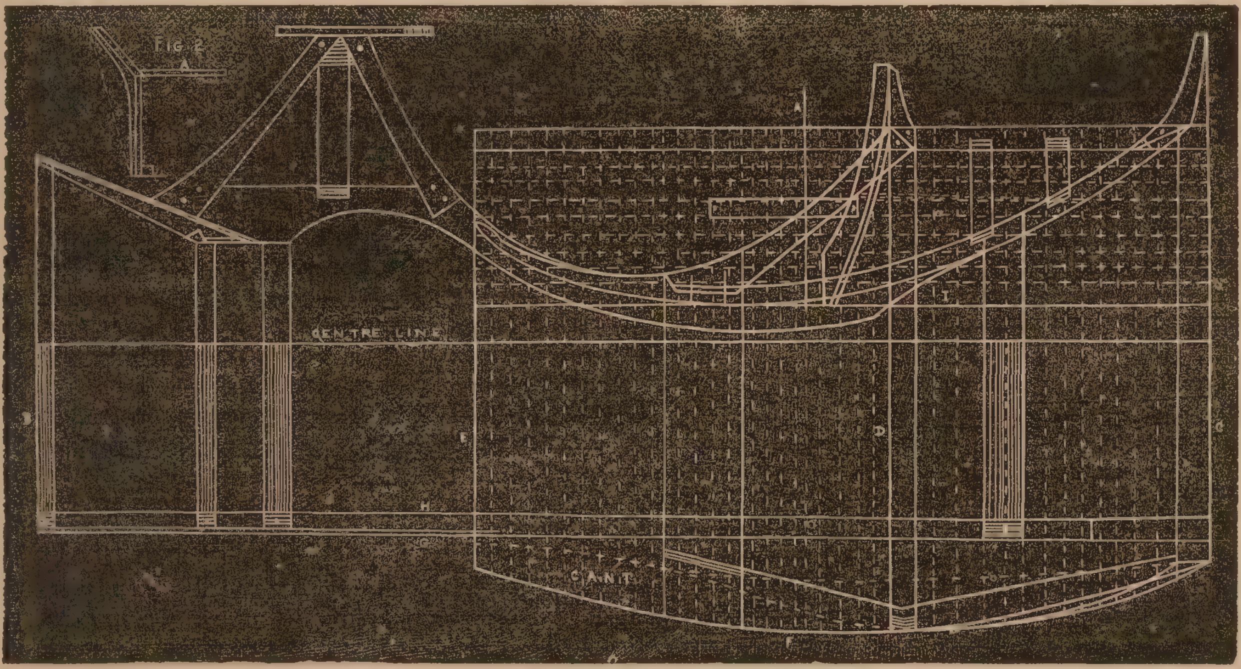
You will proceed and measure from centre line on line D 23¾ inches, this being half the width of the body, and prick it off; this is one point of the establishment of line F. Take your dividers, place one point on base line I, where it intersects with perpendicular line D, the other on perpendicular line A. With this space place one point on perpendicular line D, at the first point of the establishment of line F; prick this off on line D, which is the establishment of one point of line G, and the face of the bottom side on the cant. Now proceed and lay out for the width of the boot, which is 31 inches. Measure from the centre line on line E 15½ inches, and prick it off, this being half the width of the boot. Lay your straight-edge from this point, and to the last point explained, and draw line G; this is the face of the bottom side, and is contracted 2 inches. Measure 1¾ inches from line G, and draw line H, being the thickness of the rocker. Measure 1¾ inches from line G on C, and prick it off; this is the second point of the establishment of line F. Measure from line G on line E 3 inches, and prick it off, being the third point for the establishment of line F. Proceed and sweep line F from these three points, as represented by the diagram, the cheat line for the bottom side, and also the belt rail, as explained and applied in French or square rule. The most difficult piece of this body is the front pillar, which should be pricked and swept exact, both front and back. When this pillar, with the belt rail, are ready for framing, gauge from the outside.

You will notice the face lines for these pieces in the diagram, which are for pricking off, the outside of them being your guide. You will also notice the front of the front pillar is pricked off on the cant, and also the top of the bottom side, both sweeping in together.

The horizontal and perpendicular dotted lines represent the different points needed for pricking off.

In laying down cants, it should be done in as simple and plain manner as possible; our object is to introduce no lines not necessary.

The best work is produced by simplicity of construction.



Mr. Editor:—Would be pleased to have you explain, through the columns of the Journal, the manner of constructing the front duster as spoken of on the Grant buggy, plate No. 19. By so doing you will oblige A Subscriber.

In answer to the above inquiry see accompanying illustration on the Cabriolet cant engraving. Figure 2 represents the end view of duster and flare of seat and body, A the seat frame. In constructing the seat, the front pillar should be 1¼ inches wide by ¾ of an inch thick, projecting in front of body ½ an inch, and also end of seat frame the same distance; the object of this is, in lightening out the inside all will come flush from a front view. The duster should be 1¼ inches wide at the seat frame, ⅝ of an inch wide at the upper moulding of body, projecting ahead at seat ½ an inch. After the seat is complete, screw down, cut through your seat frame skirting ¾ of an inch from front edge of body; that is, on the back line of the front pillar. You are ready for fitting your duster to both body and seat, the back part coming against the seat skirting, and also on a line of back part of the front pillar. When fitted, glued and griped up, lighten as shown by figure 2. Finish with a light moulding ¼ of an inch from the back edge, passing around the top edge of seat, (this moulding or rail can be worked before the seat is put together,) for receiving a stripe, also the same on the skirting. Now you are ready for lightening out the inside as before mentioned; the pillar of the seat was 1¼ inches wide. We lighten back ½ an inch, leaving it ¾ of an inch square; this can be rounded down, leaving a place to receive a corner plate. The inside of seat is all painted; no trimming, except cushion and fall. There should be iron stays each side of the round corner, inside of slat that runs up and down, also one in centre of back rail, taken from ¼ inch round iron, T-plate top and bottom. Returning to the duster, which projects ½ an inch at the seat skirting, coming flush with the panel near the bottom side; this will be rounded, lightened out on the inside, showing about ⅜ of an inch on the front edge.

Java Village, N. Y.

Mr. Editor:—Will canvas prevent the joint showing on round corner bodies, and will not the glue be affected by the oil or dampness? Please answer, and oblige A. C.

Willing to impart advice to our subscribers, we will say that our experience is always to canvas round corners of coal-box bodies; it is not expected that canvas will hold together a corner, but if done in a proper manner, over good joints of a well put together corner, will prevent them from showing through the paint, which will often show, though the joint be not broken. The canvas will not come off, or be affected by oil or dampness.

In Vol. III., No. 3, (December,) you will find there, fully explained, this manner of gluing, together with a diagram showing the manner of laying out and construction of round corners of coal-box bodies, so that they will stand.

The publisher of the JOURNAL, having secured several copies of the first six numbers of Vol. III., (which are out of print) has had them bound with Vol. II., making the two volumes complete in one book, which will be furnished for $5.50, sent by mail, post paid. This is an indispensable work to a coach-maker, containing more practical information, with superior drafts of stylish carriages, than any two volumes extant.

Wheel-Horse and Mallet.

SPOKE SHAVE, EDITOR.

Having got our wheels ready for the hooper, we propose to follow them through the smith shop. It is not my purpose to dictate to the smith, but I do propose to consult with him as to what are the true principles that govern the hooping of wheels. In order that we may understand each other. I shall commence with the wheel where I left off in the last number.

After we have finished the wheels, they should be placed in some dry place, where the fresh or damp air cannot get to them. They should remain there not less than one month, and if time would admit, six months; the longer in reason the better, because the longer they stand the stiffer the spokes become, and the entire wheel becomes firmer. Before the wheels are taken to the smith shop they should be carefully overhauled by the wheeler. To do this we will take our *set chisels* and set our wedges down; this will give us draw on our rims. We also pound or hammer the rim down to the shoulder on the spoke; this, you will perceive, is very necessary, if we wish to prevent our wheel from being what is commonly called *rim bound*. When we have our rim as we desire it to be, we then examine our tread, and satisfy ourselves that it is ready to receive the tire; if not, we proceed as in last number.

It is essential that our tread should be perfectly square with the face of the wheel; that is to say, we lay a straight-edge across the face, then square from that. The necessity for this is apparent, when we consider the draw of tire; the tire should draw the rim equally at all points if we would wish to have our wheel true with the front or face of the hub, as it was when we drove our spokes. Having got our tread as above required, we next examine our joints, and see how they stand, as in last number. We must bear in mind this one fact, which I suppose all wheelers are too well aware of—if they are not it is strange to me—and that is this, let us be ever so particular, we will find that some rims incline the wheel to the front, while others incline back; it is seldom that, in a set of wheels, we can get them all face the same. I do not mean to say that they incline either back or front to any great extent, but it is perceptible when we throw our eye across the face of rim or wheel. In jointing our wheels we must pay attention to this, and see that our joints meet the case.

We must also bear in mind the amount of dish we wish to give our wheels. I generally joint my wheels so as I can get about ⅜—you will remember that the front spoke is drove ⅛ of an inch back of front mortice—this gives me ¼ from the front spoke. Some wheelers give more, which may be correct; but I will give my reasons for ¼ or ⅜. Now, it is essential that every part of the wheel should have a certain portion of labor to perform, that, too, in harmony with all other portions. We have our rim as we want it, we have the spokes in hub the same; then the necessary draw for tire; if we get too much joint we get too much dish; the result is, our spokes have to follow the rim. By the time our joints close, we find our spokes all sprung to the front; the result is, there is no strength in them; the hub is also under a continued strain; the rim, likewise, from being bound on a square line. Such being the case, *as in my opinion*, I claim that the above dish is sufficient. With this dish we find the spokes are all as they should be; all portions performing their labor harmoniously. As soon as the wheel becomes a burthen of itself, it is as soon rendered worthless.

At this point we may refer to axle *setter*, with his swing from 4½ to 5 inches. For the present we will let *him* swing, but shall, to use a common-place phrase, put a flea in his ear in our next. I am not disposed to let him stand off and *chuckle*, while the wheeler and hooper are fighting as to which is right and which is wrong. This *brother smith* and co-laborer *Vulcan* is about played out. Having got a proper understanding of our point, we turn our wheel over to the hooper; he should be ready to put his tires on immediately, not have them standing in the smith-shop three or four days, or a week, for the reason that, as a general thing, the air that circulates in the smithshop is fresh or damp; the wheels being thoroughly dry, dampness is absorbed, and if hooped in this condition, the tire is liable to become loose when again taken to the paint shop, which is generally a dry room. As I have other matter, I shall close for the present number.

J. S., OF DUNNVILLE.

Your inquiry as to what will prevent powder post in hickory spokes—I suppose you to refer to the cutting of the *worm*. I am unable to say what will prevent them from cutting. I have heard the argument that heating will kill them, but the proof has never appeared, and I think never will, for the reason that they are quite as destructive to the *felloes*, which have passed through the process of steaming. My opinion is, that they are the creatures of sap; the remedy is with those that cut our timber. As this is a very important subject, I shall defer it until our next issue, and I hope that something intelligible may grow out of your question.

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

SHORT AND EASY TURNING.

To bring a carriage into a different course from a straight ahead one, requires a circular motion of a quarter of a full circle; at a half turn a carriage has established itself in a right angle to its position at rest.

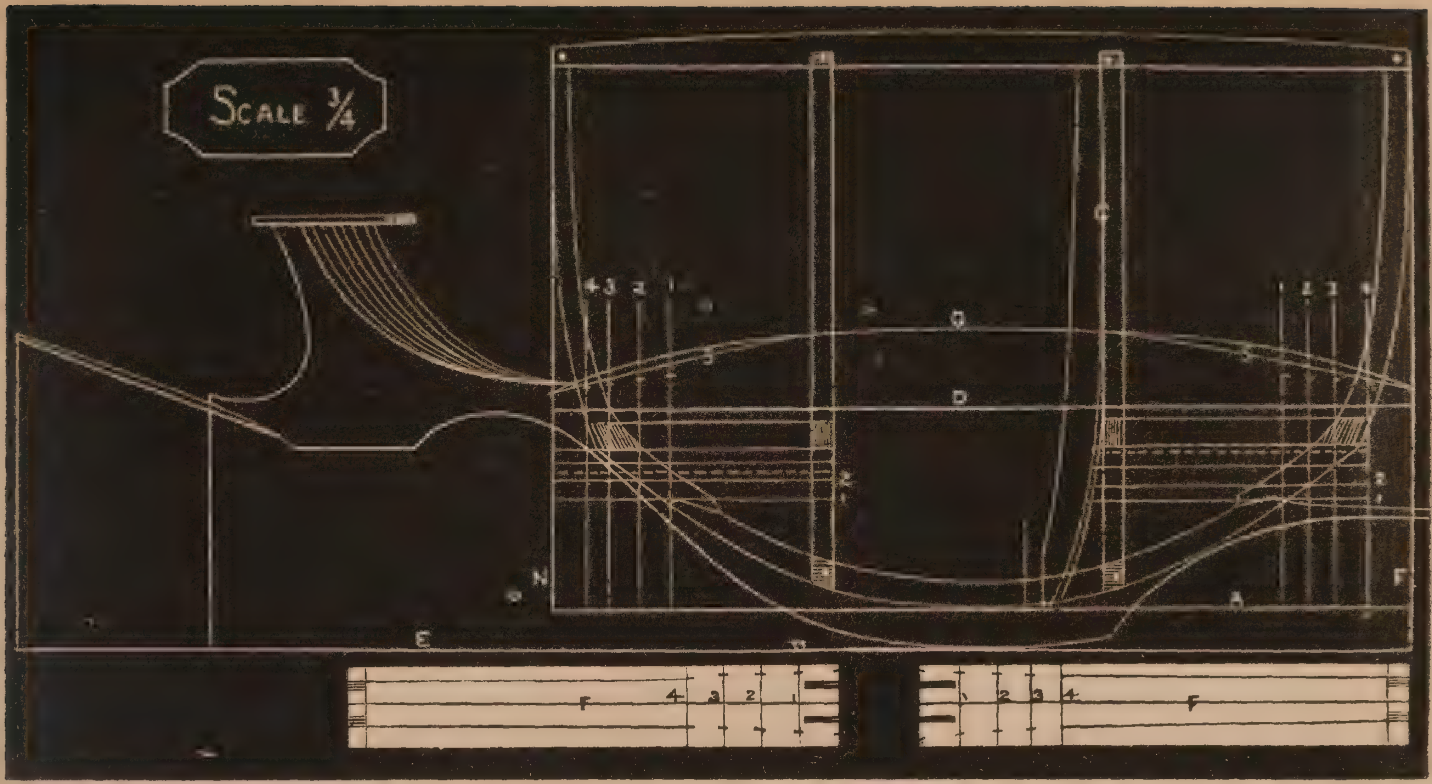
A two-wheeled vehicle turns on one wheel, which forms the centre at the place where it touches the ground; the opposite wheel forms the circle of said centre. The body in this instance follows the circular motion exactly as the axle, and consequently retains a steady position above the wheels.

A four-wheeled vehicle remains in a straight line, when first the front pair of wheels are turned under, then by the effect of the draught as the hind pair of wheels follow in a wider circle. To effect a turning, we bring the front axle first in a corresponding direction with the desired turn.

We make distinction between the moment of turning, or the angular position of the axles, previous to the turning itself, and the effected turning of the vehicle around a centre or king-bolt, according to the construction of the carriage-part. The wheels have to be brought in a position corresponding with the direction of the turning. The body must be fully supported after the turning, and the front or dickey of a carriage to stand in a right angle to fore-axle.

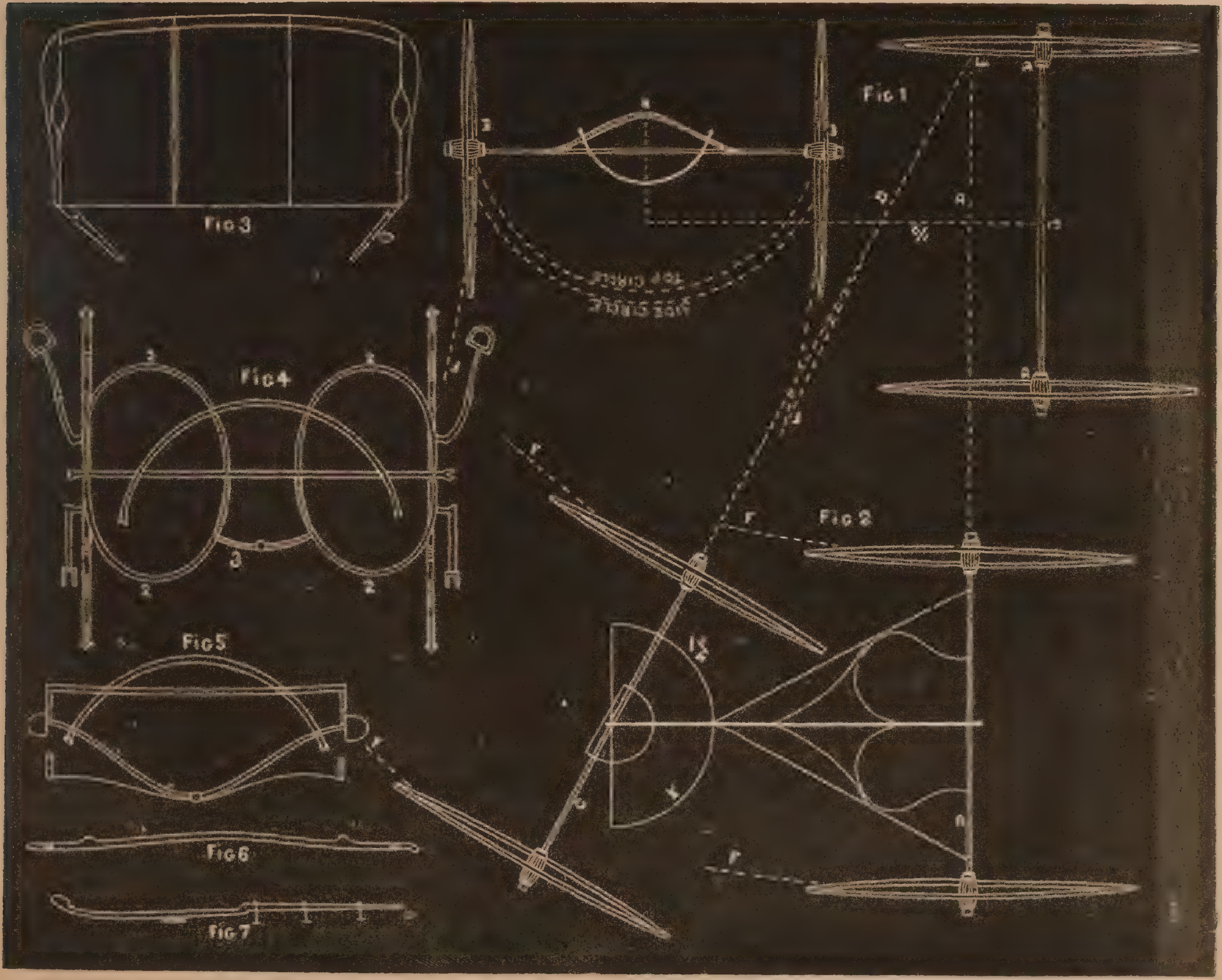
We have to consider a few points relative to the height of the front wheel, and the elevation of the body above the ground, which averages generally 30 inches. To give a front wheel its proper height, (between 3 feet 4 inches and 3 feet 6 inches,) and have it turn a full circle, we sweep the body at the required place, viz: put in the wheel-house, of a proportioned length and a depth between 3 and 4½ inches.

The front carriage part is fastened around the king-bolt, turning that part horizontal. This action causes the front wheel to describe a circle, whose diameter is the width of the track; but as



Coach Drafting: The French, or Square Rule.

Three-quarter inch Scale. Explanation on Pages 108–9.



SHORT AND EASY TURNING; Also, FRONT CARRIAGE PART FOR CUT-UNDER BUGGY, Plate No. 13, in January Number. Explanation on Pages 108–9.

the wheel leans over at the top through the dish, we have a larger circle in the middle and top of the wheel. We therefore find first a top circle, having a diameter equal to the width between the highest point of the wheel, and a side circle following the termination of the cross diameter of the wheel, having as a centre the king-bolt.

We refer now to the diagram, *Figs.* 1, 2, (see front of JOURNAL,) showing the difference between a full turn at a four-wheeled carriage, and a broken turn at a two-spring, reach gearing.

Front wheels $e\ e$ turned half way, or in a right angle with the dickey; points $d\ d$ or top width of the hind wheels will, after the application of the draught, follow the turn of the front wheel parallel with circle $f\ f$, having its centre in g. Top and side circle centre in h.

Looking next to *Fig.* 2, we find by comparing the longer circle $f\ f$ to the corresponding one in the foregoing illustration, that it takes considerable twisting and jarring to effect a short turn. Lines $c\ d$ and $b\ d$ at their intersection e, the centre of the circle, require such a space to turn fairly. This is a reach gear causing the hind wheels to turn around the same centre, shown in lines $f\ f$. We have applied a segment k to show how near we can get to a quarter turn. This applies to most of the light bodies without a demicut or wheel-house. Both figures drawn of the half-inch scale.

Fig. 3, a neat pattern of a dash, 15 inches high, having a handle formed by the inside rail, welded to the outside rail. This dash might be covered entirely, leaving the handle open, or from the second rail.

BROOKLYN, N. Y., March 11th, 1869.

We have received an order to build a four-spring cut-under buggy, Plate No. 13, January number of JOURNAL, 1869.

Would like to ask a favor of you, if you can grant it? and that is, a top drawing of the front platform carriage, which is all iron except the bottom bed. Would like it in your next number; if it was not a new thing to us, we would not ask it. By so doing, you will oblige

A SUBSCRIBER.

In answer to the above, we have given the drawings—see front of JOURNAL. Fig. 4 represents the lower part, with springs attached. In our explanation of Plate No. 13, it says, the bottom bed to be made of wood 1 in. by $1\frac{1}{8}$, plated by a $\frac{3}{8}$ plate, swedged.

If for ourselves, we would prefer the bottom bed of iron, (this would make the entire carriage of iron,) on account of lightness of appearance. It can be taken 1 inch square, lightened down, except the bearing of the fifth wheel, which is shown by Fig. 6, which is the front view.

The scrolls for the end finish, can be of brass, lapped and riveted under the box-clip.

The Manner of Producing these Scrolls.—Take two pieces of whitewood, thickness required, doweled together, (scroll to be cut to taste,) with a running lap, lapping to the iron. When the pattern is complete, can be taken apart in centre for the molder to produce his castings. By this manner the builder can retain his own pattern of scroll in brass as well as in wood, which is generally practiced by good builders, and their work is known by its finish.

Half-fifth wheel and iron pumphandle scrolls, are produced in the same manner, which is represented by Fig. 7, made in the same manner.

In Fig. 4 the side wings are made whole, 9-16 round at two points, increasing in size and flattening at top to receive (Fig. 3) the bridge, which is bolted at the top and finished off even with the side wing. Half-fifth wheel: $\frac{7}{8}$ by $\frac{3}{8}$.

Fig. 5 represents the top part of carriage, with an iron bent bed; can be swept to suit the turning of the wheel under the body.

We have given dimensions at the different points. It requires a good smith, with good judgment, to proportion—to give strength where needed, and to lighten down at other points, to produce a light and durable job.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

THE ART OF COACH PAINTING.

Having been repeatedly asked for full instructions in the art of coach painting, we have concluded to devote a certain amount of space in each number to this branch, and continue it until fully completed.

We do not promise to lay down rules to govern the painter under *all* circumstances, or to set up *our* notions in opposition to other painters, who have, through years of toil in the paint room, discovered modes of working, probably different from our own, equally as good, and it may be, better.

We are aware we have entered on a work which will require a great deal of forethought and laborious research. But we have made the promise, and will keep it to the best of our ability.

Now it cannot be expected that every manufacturer of carriages will be able to furnish the painter with rooms well adapted to turning out first-class work. Employers with small capital are compelled to put up with many inconveniences, and they find the painter louder in his demands for *more room* than either of the other branches. We have often heard the remark made, that the "*painters* are the most troublesome set of fellows in the shop, that they are never satisfied," &c.

We will not deny the charge, but merely say in reply, that they are the *subjects* of more fault-finding than the other hands, and expected, in many instances, to perform *miracles* almost. This is especially true in small shops through the country, where they require a painter and a green boy to rush out the work, new and old, giving as good a finish on new work as a first-class shop in New York, Philadelphia or Cincinnati.

The paint shop should be roomy, well lighted and ventilated. Bodies and gearings should not be painted in the same room if it can possibly be avoided, and the rough work on bodies should be done in a room separate from the coloring room.

In a well-regulated paint shop will be found a good assortment of brushes, suited to the different kinds of work; paint pots in abundance, two paint mills, a marble slab on which to mix colors, and also a stone to be used exclusively for making putty on; water buckets, sponges, chamois, pallette knife and putty knives. Light tressels, set on castors, for light bodies; and heavy tressels, with two wheels and pole, for heavy bodies.

Screens, covered with heavy paper, or enameled cloth, to protect varnished work from flying motes, and from the unsightly marks made by flies in summer.

An assortment of colors, wet and dry lead, whiting, lump and ground pumice stone, English rubbing stone, leather shavings for cleaning the paint mill, sandpaper, brooms, and a ley kettle for dirty paint pots.

Shelving sufficient to hold the cups that are in use, and also small drawers to hold loose dry colors to prevent wastage. On the walls should be placed two or three wooden boxes—one for old sandpaper, one for new sandpaper, and one for odd nuts, bolts, screws, &c., which will gather during the course of the year.

Wrenches, hammers, screw-drivers, &c., &c., should have each an appropriate place. Narrow strips of leather should be tacked up along the windows, and at different places through the room, in which to place the dusters, to avoid the necessity of throwing them on the floor, or placing in a position where they will easily be thrown down in the dirt.

Light stools for holding the paint and varnish cups, made broader at the bottom than at the top, so as not to be easily upset; wheel-boards or props, covered cans for varnish brushes, and wire stands to lay the brushes on when varnishing.

Having thus given a general idea of the wants of the *voracious* painter, we will now enter into the details, and in the subsequent articles place before the reader the every day workings of the paint shop in the order in which we have stated them in the commencement of this article.

LIGHT AND VENTILATION.

We know of nothing more annoying to the painter than a dark room to work in. In mixing various shades, or compound colors, one should have good light to insure the tone required. But as the paint stone may be placed close by a window, and fixed permanently on a bench, (as it should be,) the compounding of colors would not be the most serious objection to a dark paint room.

In the busy season, when the painter is often compelled to work on some jobs at a distance from the windows, many imperfections may be overlooked on the surface, and in touching up on old work, the wrong shade may be given to bruised places for the want of sufficient light. These trifles may seem hardly worthy of notice, yet every painter is aware that much trouble is occasioned thereby.

In striping a gearing or body, ornamenting, coloring, rubbing varnish and varnishing, one should have good light. If a shop cannot be lighted from the sides, then there should be skylights, for *good light* a painter *must* have to insure work which will not look as if it was grained when it is subjected to the severe test of the clear sunlight.

The paint room should have a means of ventilation which would continually carry off the noxious vapors arising from poisonous lead and colors. As not one in a hundred of the carriage shops are thus ventilated, the foreman in the shop should see to it that the windows are opened daily in the winter season, and a current of fresh air allowed to pass through the shop. Good light and ventilation would add greatly to the health of the painter, and secure to employers the services of men skilled in their trade, who, under the present system, are compelled to seek other employment, through failing health, at that period in life when their services are most valuable.

Bodies and gearings should be painted in separate apartments, as it is impossible to keep the tires from coming in contact with bodies as the carriages are moved about from time to time. Bodies are also liable to be spattered with lead and filling, and are often bruised by apprentices, who, at the dinner hour, enter into a general friendly combat, by throwing at each other the remnants of their dinners, dusters, or anything else that comes handy.

Boys cannot be expected to think much while engaged in their sports, and it happens that serious damage is done by them.

The rough work on bodies should be done in a room kept for that purpose; the procees of rubbing out work demands the use of a great deal of water, which, mixed with the filling, flows over the floor, making it wet and disagreeable to whose who may be working near by, and not unfrequently finds its way through into the room below, annoying those who are there at work.

In small establishments it will be useless to attempt a complete division of work, yet, if you have but one room, it will be better to divide *that* up, by keeping bodies at one end and gearings at the other, than to have everything in confusion.

BRUSHES.

Paint and varnish brushes are numbered as follows, viz: from No. 1 up to No. 6, and from 0 (nought) up to six noughts or cyphers. No. 6 is the smallest, the sizes increase till we arrive at six noughts, (000000.)

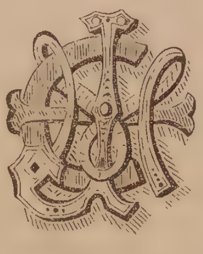
For carriage work, from 0 to 0000 are about the sizes required. The smaller sizes may be found convenient occasionally, but should not be used where larger sizes would serve as well. It is a waste of time and labor to mince around over work with small *tools* or brushes, when larger ones could be substituted.

Smaller brushes are manufactured, numbered from 1 up to 10, which painters call *tools* or *sash tools*. Nos. 8, 9, 10, are the sizes best adapted to carriage work. Just here we will state, that painters invariably call the small brushes *tools*. Those used for striping and ornamenting are called *pencils*.

The above named brushes are made round and oval, and filled with different qualities of bristles. The ordinary paint brushes contain the inferior and coarser grades of bristles; the varnish brushes the selected and finer qualities. Certain grasses are sometimes mixed in with the bristles, making a worthless and expensive brush in the end.

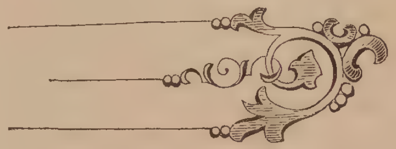
There are also *flat* bristle brushes of various sizes, which may be used to advantage on bodies and gearings.

[TO BE CONTINUED.]

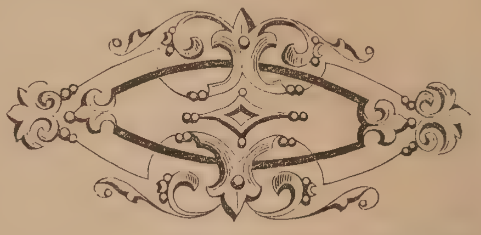


CMIJ.

Monogram.—Lay in the letters, gold and light, and shade according to instructions heretofore given, or use burnt Sienna, white or yellow, mixing up three or four tints, and paint the letters so that each one may be properly displayed. Light with clear white, and shade with burnt Sienna and burnt umber, mixed to suit the color of the letters. The dots and markings should be of a greenish hue.



Ornamented Stripe.—This pattern is intended for a light axle bed, and may be put on with the *pen*, the leafing to be filled in with horizontal or curved lines, as may suit the taste of the painter. The use of horizontal lines will answer, provided the painter has the idea of the pattern fully impressed on his mind, and can make these small lines, of the various lengths required, to form the leafing. The scroll and stripes may be put on with gold or bronze. The small centre scroll and stripe to be painted a color which will contrast with the ground-color of the gearing, but of a subdued tone, to prevent its detracting from the brilliancy of the gold or bronze. Or lay in the scroll and stripes with color, and the centre scroll and fine line gold.



Ornament.—A pattern which will require great delicacy in handling. An elliptical form, varied by the use of the circle, may be laid in all gold, or part in color. After the pattern is marked on, use a fine line pencil, about an inch long, to form the fine lines, and also to sweep the circles, before putting on the leafing. The fine line pencil should be used with a handle, like the ornamenting pencils.

These designs may be enlarged or reduced by laying them off in squares, and then by marking off squares, larger or smaller, on paper, or on the panel to be ornamented, and trace the lines of the pattern through these lines, so as to correspond with those drawn on the original.

Austintown, Ohio, March 8, 1869.

Mr. Editor:—I wish to ask you a question or two. After a buggv body is brought to a surface by rubbing down the rough stuff, I wish to know how to mix, and how to apply the color for carmine lake, and the number of coats to make it ready for varnish? Also, is there a color in use called wine color, and how to proceed to paint it? By giving me instructions for these, you will greatly oblige a subscriber. M. E. T.

Answer to Question 1st.—Carmine being very transparent, it is of the first importance to obtain a solid ground-work on which to paint it. After the ground-work is secured, it will be found somewhat difficult to make the carmine cover well, without showing streaks, which would look in the sunlight as if it had been grained. When the surface has been gained take *dry* white lead and Indian red, and mix up a pink or flesh-colored tint. Grind it out very fine, and apply with a flat camel hair mottler, (blender.) Two coats of this will be necessary, except on very small panels. Hair off each coat to remove any minute particles of grit that may be found on the surface, or, which is better, take 0 sand-paper, and after having rubbed the sanded faces of the paper together, use *without doubling it*, going over the surface lightly. If the color is dry it will not cut through; this will remove grit which hair would glide over.

Next, give the body a coat of *English vermilion*, if you desire a *brilliant* shade of carmine and *Indian red*, if you wish a more subdued color. Take of the best carmine, No. 40, and mix in oil, with sugar of lead for dryer, grind out fine, and add a small quantity of varnish to prevent the color drying off dead, or mix in varnish; some painters prefer the latter. Apply the carmine with a blender, if you have one of the *best* quality; if not, use a bear-hair or soft bisrtle brush. The color *must* work freely, be brushed on rapidly, and finished while wet.

Patching the carmine on the width of the brush at a time, is the main cause of so much streaked work. Put on the color freely, spread it and finish up and down. If the panels are too large to finish at once, make as few laps as possible.

One coat, and a strong coat of color and varnish should cover solidly. When the color and varnish coat is dry, take off the gloss, with a sponge and water, and fine pumice, rubbing lightly, to not disturb the color.

Put the first coat of rubbing varnish on comparatively thin, rubbing it lightly when dry. The next coat will bear a good rubbing, without fear of disturbing the color, or showing any red specks.

Carmine may be painted on dark browns, or even black, but the richness it possesses is shown to best advantage on a ground-work, which is light.

Answer to Question 2d.—Wine color is painted in imitation of claret wine. There is a crimson called claret lake, quoted in the price list at $3.50 per lb. The lakes may be painted on dark lead-color, black and different shades of brown. The general practice is to paint the *red* lakes over brown, mixed of Indian red and lampblack. The ground-work should be lighter or darker, according to the color of the lake used. Grind the lake in sugar of lead and oil, or varnish. Give two coats of the ground-color; two of lake, and one of color and varnish, or one coat of clear-color, and two coats of color and varnish. Apply the color similar to the instructions given for painting carmine.

———

Watertown, N. Y.

Mr. Editor—*Sir*:—I received the numbers of the Journal, Vol. IV., and am well pleased with them.

I have read the articles from the different correspondents of the several branches, and like them well. In your painting department your correspondent makes a serious mistake. It is this—"After the filling is rubbed down," he says, "give the body a coat of lead, and sandpaper." Now look, after getting a surface as smooth as marble, destroy it with a coat of lead, and its attendant brush marks are very little better than it was before filling. Now I say, after rubbing down, give the body a coat of lamp black. laid on with a camel mottling brush, after dry rub down with curled hair. No sandpaper on a job after rubbing down, and there is nothing like lampblack between hard surfaces and the flat colors. It is of an oily nature, and I guarantee that none of the painting will peel off down to the rough stuff. I think if your correspondent will try this he will never depart from it.

Yours, truly, C. W. A.

The writer of the above will pardon the liberty we take of giving publicity to the above extract from his letter. He evinces the right spirit; that of reading the Journal, and making known his objections to what appears to him to be erroneous.

We invite correspondence from other painters, who may feel disposed to discuss the question, through the columns of the Journal.

If C. W. A. alludes to the article on page 91, Vol. IV., No. 6, we will have to correct him, for in that article it does not recommend sandpapering to *obtain a surface*, but as a means of detecting the imperfections on the surface, which may have been overlooked in the progress of filling up the body, or bruised and burned by the smith. After puttying, the lead is to be rubbed down with pumice stone.

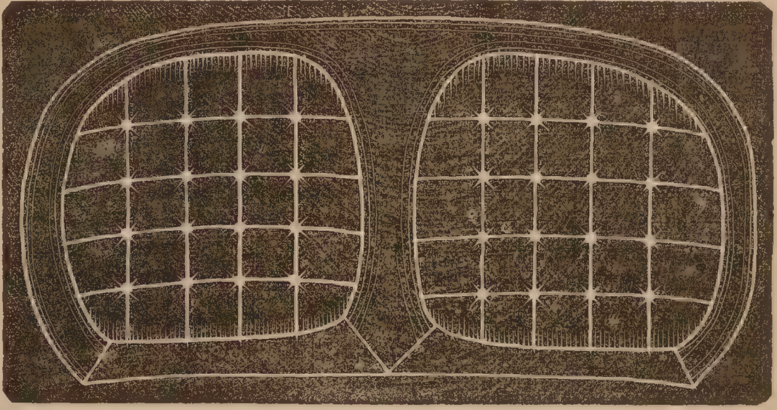
We have painted bodies without lead, with lead, and fine sandpapered it, or rubbed with pumice stome; have also used lampblack and dropblack. A good job may be obtained by either mode.

———

South Amesbury, Mass., March 8, 1869.

Mr. Editor.—Will you please inform us how to paint purple, carmine, light and dark shade, and what kind of a ground work is best for purple lake? F. S., & A. O. C.

Answer to Question 1st.—Purple is a color which will be rich or dull, according to the quality of the pigments used. Purple mixed with Prussian blue, vermilion and white, would cover well without any ground work. But *a rich tint of purple* cannot be obtained without using fine lake, ultramarine blue and white lead or whiting. Use about one part blue to five parts of lake, adding white lead or whiting sufficient to change the tint to the shade desired; paint it on a ground-work of lead-color of a purple cast.



MILLER'S DROP-BACK.

Answer to Question 2d.—See answer to questions in this number of the Journal to M. E. T.

Answer to Question 3d.—Purp'e lake should be painted on a dark-brown ground-work, mixed of Indian red and lampblack—one part Indian red to three or four parts of lampblack. It can be painted on dark lead-color or black, but it covers best, and retains its richness to a greater length of time, on the ground-work above-named.

Indian red and lampblack have a good body, and wear well. As the lakes sink into, and partake more or less of the color of the ground, it is well to have it (the ground color) as near the color of the lake (when mixed up) as possible. A shade darker is preferable to a shade too light.

Velocipede Wheels.—See colored page advertisement.

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

THE NEW STYLE OF CUSHION FOR NO-TOP BUGGIES.

NOW USED EXCLUSIVELY BY CORBITT & SCHARCKS, OF TWENTY-FIFTH STREET, NEW YORK CITY.

In the last number of the Journal I promised a sketch of this unique and finished cushion, which is admitted to be the most perfect finish yet invented for the class of work which it is used on, and entirely dispenses with lining the seats inside, as now done, because it gives the seat the appearance of being lined.

HOW TO MAKE THE CUSHION, AND HOW IT DIFFERS FROM THE OLD STYLE.

First, the bottom is marked out as is usual to the size of the seat, and a quarter of an inch allowed all around for the seam, then the front facing is cut out and fitted, but should not be more than one and a half inches high, and made in this way.

HOW TO MAKE THE FRONT FACING.

A piece of split leather is fitted to the pencil marks at the bottom, and flared to fit the seat. A piece of muslin is then stretched on a board, and the leather pasted on to it, patent side to the muslin; next, three very fine raisers, 3-16ths of an inch wide, are pasted on, or else one three-edged raiser. When dry the raisers are covered with a thin welt leather, and which must be carefully creased in the raisers; these raisers can be put on correctly by having a piece of hard wood made just the thickness you desire the raisers should be apart. Now take a piece of sandpaper and scratch the welt leather between the raisers so the paste will stick. Next take a piece of the cloth you are trimming with, wide enough to cover the whole facing, paste it lightly and then with a sharp knife cut a slit along it for each raiser, only this cut must be one inch shorter than the raiser to allow for the stretch of the cloth, pull and tack down both ends, force the cloth in between the raisers, then lay the piece of stick before spoken of on the cloth as it now is between the raisers, (which show as a leather welt,) and strike the stick with the hammer, so as to set the cloth down to its place. When dry stitch, and you have a front facing with three very small leather welts showing between rows of cloth, and it looks well.

The back and side facing should be in one, or without a welt in the corners, and must be fitted to the full size of the seat, the top of the facing to be even with the top edge of the seat; line the japanned side with muslin pasted on. When dry mark with pencil two inches from the upper edge all around; then take a strip or strips of cloth, three and a quarter inches wide, wrinkle it to the pencil mark, (one inch fullness to three inches of length,) for the purpose of forming a wrinkled roll on the top of and projecting clear above the cushion top proper. Next sew a welt around, the edge of it to the pencil marks; now join your front facing to this one.

The top should be made in squares on a frame, and must fit *only* from the welt *below* the wrinkled roll to the front, if made. Now sew it to the front facing, then *turn over* the cushion and sew in the top to the welt which is already sewed on below the roll. Next sew the top edge of the wrinkled roll, and stuff lightly as you progress; when done, have a piece of cloth ready the size and sweep of the back and side facings, and large enough to cover them. Sew this cloth and also a welt to the top of roll, (now the top edge of cushion,) and when done turn it over so as to cover the back and side facings; you may either pull it tight or paste it down. Now sew the welt for the cushion bottom to the facing and blind, sew in both sides of the bottom, leaving the back of it open to stuff from. Now stuff the cushion from the bottom, and tuft to suit the top.

The fall is sewed to the cushion, and two small straps are sewed in with it to fasten the cushion to the seat, while the cushion straps are *mock ones*, sewed in under the roll, and the buckle sewed in with the fall, so as to show against the front of the cushion; these cushion straps are made of light split leather, covered with cloth, and bound with collar leather on the edges. This is a very handsome, stylish, but difficult cushion to make at first; but if I have succeeded in making the *modus operandi* clear enough for practical use, you will have a cushion with a wrinkled roll standing up from the cushion proper, and filling the seat so completely as to make it appear as if lined, while the mock cushion straps, and the fact that the cushion does not have to be turned inside out to stuff it, makes the most perfect and beautiful finish I have ever seen.

MILLER'S DROP-BACK.

This back is made up in two separate parts, and finished with roll around each part, either smooth or wrinkled. The roll is made up of five pieces. After the squares are finished sew on a patent leather welt, then sew the roll to the welt, and finish the outer edge with a welt also. Sew the roll to the centre part first, then all around, as in other roll-backs. D. MILLER.

ALTON, Illinois.

In making this "back," we would recommend a wrinkled roll, and instead of making it, the roll, in five pieces, with your cloth doubled, cut the part for the squares from the centre of the half width of the cloth, and the piece left over, all round that required for the squares, will be found sufficiently large to make the roll *all in one piece*, with the advantage of having the grain to brush down equally, except in a *very* wide seat; then you will have to piece in the centre; if the roll is wrinkled, this piecing will be very little trouble.—[ED.]

Original Flashes.

For the Coach-Makers' International Journal.

QUESTION. Is one two? If not, why do the waiters at the Central Dining Saloon persist in saying one's two? (one stew.)

BECAUSE a carriage has *springs*, does that justify a drunken coachman in the attempt to water his horses at them?

WHEN a set of wheels is tired, is it humane to *run* them?

WE deny that the people of this world at any future time in its history, will live in perfect peace and harmony. Because there will continue to be a *revolution every twenty four hours.*

To what part of a carriage top are the ladies most partial? Why, *the bows.*

BECAUSE carriage hubs are *boxed*, may we infer that they are always (knotty) naughty?

WHEN will the hind wheels of a carriage in motion *overtake* and pass the front wheels? Why, when the carriage is turned clear over.

WHY is the horse always hitched in front of a vehicle? Because it is natural for man to abuse others *behind* their backs.

WHEN may we safely conclude that a man had swallowed a large portion of his buggy? When we see him *throw up* the top.

WHY are the hind wheels of vehicles generally made the largest? Because in the friction of the hind wheels on the road being greater—and somewhat—and the periphery of the front wheels being less—well, it is an axiom that if the front wheels are the smallest, the hind wheels will of course be largest.

Velocipede Scraps.

THE name "alped" is proposed instead of velocipedes.

THE velocipede has reached Idaho.

THE "velocipede hat" is the latest.

NORFOLK, Va., longs to see a velocipede.

NEW YORK has a new paper—The Velocipedist.

A SPRINGFIELD clergyman has become a velocipedist.

A NEW king rules, and that king is the velocipede.

A FIRST-CLASS velocipede costs $32 in gold in Paris.

A MILWAUKEE velocipedist wagers $1,000 that he can make forty miles an hour.

PREMIUMS are given to velocipede races by the Michigan Agricultural Society.

MISS KATE PUTNAM is doing the bicycular velocipede at the Davenport (Iowa) Theatre.

"VELOCIPEDE RINK" is one of the new combinations. "Bathing rink" we hear already mentioned.

RIDING a hog through the streets is said to be a good preparatory practice to managing a velocipede.

THERE is a city ordinance in New York, forty years old, inflicting a heavy fine upon any one who uses a velocipede in the public streets.

IT has been demonstrated out West that women can ride the bicycle velocipedes by wearing bilegular garments.

SOME Taunton Yankees have opened a "Velocipede Riding School" in the "Crystal Palace," on the site of the old American House.

SOMEBODY claims to have invented an "entirely new" velocipede, the motive power of which is the weight of the rider. Can it be a hand-sled?

VELOCIPEDISTS have encroached so greatly upon the privileges of pedestrians in Lyons, France, that the Mayor has issued a proclamation compelling the former to attach lanterns to their machines at night, and to keep the middle of the street.

HOOSIC FALLS, N. Y., claims to have produced the first velocipede. It was built in 1821 by David Ball and Jason Burrill, and was an undoubted success. It was in existence as late as 1866, when it was destroyed by fire, together with the building in which it was kept.

NEW BEDFORD, Mass., had a velocipede race for a silver cup recently. A large number were present, and there was much excitement. The distance to be accomplished was a quarter of a mile, which was ten times around the rink.

THE New York *Sun*, referring to the presentation of a velocipede to Mr. Charles A. Dana, very happily quotes the line of Virgil:

> "Timeo Dana-os et dona ferentes."

HENRY WARD BEECHER says he thinks "the coming man" is coming on a velocipede, and he should not wonder if some day the thousands of the congregation of Plymouth Church would be seen stowing away their velocipede machines in a proper quarter.

THE velocipede fever is spreading. Within the last six months some twenty-five patents for improvements in the velocipede have been procured at one agency alone. The fertility of invention in this direction appears to be greater in Indiana than elsewhere.

THE velocipede fever rages at Chicago, the level streets of that city being favorable to this method of propulsion. A correspondent says: "Several of our business men living two or three miles from their offices make their daily trips with two-wheeled vehicles, quickly leaving the discomforted horse car in the distance.

J. J. STERLING, of Bridgeport, Connecticut, is making a very nice velocipede, with ivory handles, gold banded, and all the iron work silver plated, as a show machine for a dealer in a neighboring city. It is to be placed in a show window hung with black velvet, and is expected to excite the velocipede fever to boiling heat.

THE vexed question, "Can a woman ride a velocipede?" seems to be in a fair way to be decided. A pretty young woman astonished the gray-coated policemen, and pleased the public generally, by appearing in the Central Park, New York, the other day attired in manly costume, and riding a splendid two-wheeled turnout, which she managed with perfect skill.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted.—Painter and Trimmer, both first-class, want situations. West preferred. Address L. E. S., 2018 Fulton avenue, Brooklyn, N. Y.

Wanted—A first-class Painter; one that can take charge of paint shop. An experienced hand preferred. To a hand that will suit us we will give a permanent situation, and good wages. Address G. Woeber & Bros., Davenport, Iowa.

Wanted—A good Body Builder; one that would take charge of a shop where 15 hands are employed. Also, a good Trimmer to take charge of a trimming room. Address Wm. Stockdale & Bro., Ottawa, Province of Ontario, Canada.

Wanted—A good Body-maker on light work. Steady employment given for a good hand. Address, R. Rasch, Carriage-Maker, Grand Rapids, Mich.

AUTHORIZED AGENTS.

Persons desiring to act as Agents for the Journal, will be required to satisfy us of their responsibility and integrity. Those published as Agents are authorized to receiptfor subscriptions so long as their names are continued on this list.

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George B. Hamilton, Agent for Felton, Rau & Sibley.
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M. W. Allen, San Francisco, Cal.
Chas. E. Ward, Rahway, N J.
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E. Huested, agent for Felton, Rau & Sibley.

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

Philadelphia, March 20, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.

“ snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 35 per cent. discount.

Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.

Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.

Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.

“ Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.

“ Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.

“ Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.

” Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

“ Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila, 35 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1; 1 inch, $1.30.

Buckram, per yard, 17 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyr; $1.80 to $2.

“ body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, per dozen, japanned and silver, $1.10 to 1.50.

Damask, German cotton, double width, per piece 30 yds., $16.50 to $18; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 80c. per yard.

Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 35c.; 6-4, 53c.; drilling, 5-4, 48c.; 48 inch, 52c.; 6-4; 62c.; duck, 5-4, 67c.; 50 inch, 70c.; 6-4, 80c.; pat. tan back muslin, 5-4, 48c.; do., drill, 5-4, 60c.; 48 inch, 65c.; flock drill, 48 inch, $1.00; do., muslin, 85c.; vul. rubber drill, hea., $1.50; light, $1.50; 48-inch,

Felloe plates, wrought, per lb., 16c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch. $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.

“ Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Patent Improved Knob and Buttonholes, a good improvement. $6 per gross.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.: narrow worsted, 8c.; silk stripe, 10½c.; silk barred, 13½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 16c., do., No. 2, 13c.; railing and collar, 25c. to 28c.; enameled top, No. 1, 26c. to 29c.; do., No. 2, 24c. to 26c.; enameled trimming, 26c. to 28.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $4.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

“ spoke ten. machine, each, sm., $15; large, $25.

“ bolt cutting machine, each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, star and flint, per ream, $4.50 to $6.00.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.

“ improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.

“ Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, patent black, $11.75; do., Bright, $13.75; Baltimore patent black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.

“ Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

“ Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $3.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95, 1⅛. 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $2.05; ⅞, $2.20; 1 inch, $2.35; 1⅛, $2.50; 1¼, 2.65.

“ close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.

“ close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.

“ ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.

“ neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6

“ Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8; 5 bows, $10.50.

Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $12.

“ Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.

“ plated, short, $1.20; 1 long iron, $1.37.

“ japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.

“ Bright tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.

“ Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, [illegible] to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top props, silvered, per sett, common, 31c.; extra, 70c. to 90c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50: No. 35, $1.70; No. 40, $1.90.

“ Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.

“ dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.

“ machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 6[illegible] $4.00; white, 50c. per lb. extra.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 55c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.25 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

Wood-work.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.

“ ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

“ white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.

“ sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

“ hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in. diameter, $2 to $2.25 per set,

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.

“ sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts, express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in. and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

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VARNISHES—finishing body, extra pale, $5.00: finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 50c.; pure Paris, 50c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Vermillions—English pale, $1.60; deep, $1.50, German gothic pale, $1.50; deep, $1.50; Chinese, $1.60; Trieste, $1.25; Italian, 45c.; American, 35c.; English Venetian, 5c.; red lead, 15c.

Whites—Pure lead, per lb., 14½c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 65c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c.

BRUSHES.

Paint—0, 65c.; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

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Vol. IV.—No. 8. MAY, 1869. $3.00 PER ANNUM Always in Advance.

SUCCESS IN BUSINESS.

(*Continued from page* 98.)

System.—Much loss is occasioned by a want of system in the shop. There should be in every well-regulated shop a set of hands especially for repairing; these, of course, it is better to hire by the week, and have some common jobs for them to work on when repairing is slack. But hands for new work should be kept as much as possible on the same class of work; it is better for both employer and employed. In many shops it is impossible to do so, but much dissatisfaction could be avoided by the employer studying to make as few changes from one class of work to another as the interests of his business will allow. Have a place for everything, and see that each one learns to keep things in order around him. This, of course, should be the duty of the foremen of the different departments; they should be careful systematic men, and thoroughly acquainted with the branch in which they are engaged. If the plank pile is torn down, or a carriage is taken apart for repairs it should be the duty of the foreman to see that each one rearranges everything after him *at once*, and not leave things go at loose ends for a week or a month, then take a general clearing up, accumulating scraps and pieces of stock that could have been used to the saving of uncut stuff.

For new work, hire by the piece; it is more satisfactory to the hands, pays better, and saves a great deal of care and watching that is necessary with many hands. You know just what the job costs you, while hands working by the week will, more or less, "take it easy" when they are not in a working humor.

Do first-class work, employ first-class hands, and pay first-class wages.—The curse of coach-making is the *auction shops* of our cities, of which, we are sorry to say, too many can be found in Philadelphia. It may seem profitable to some for a time, but our experience is that very few ever accumulate any property. It is a continual drive of every one in their employ to their utmost, poor pay, poor hands, poor stock, and, consequently, poor job and poor price for it, flooding the country with carriages that are not safe to go five miles from home with. The employer is not making any reputation for himself, and in dull times his business stops. This portion of our subject is worthy ten times the space we can devote to it, for, of all things, we detest the man who will, for the sake of a few dollars profit on each job, force men to work for a small pittance, waste the stock, and turn on the community a worthless thing in the shape of a carriage, while he might, at the same time, be making for himself a reputation that would stand by him and give him his full share during dull times, and be affording a comfortable subsistence to those in his employ. Good work, good hands and good wages pays best, and is more respectable. The men should be kindly and respectfully treated by the employer, which will induce them to take a greater interest in his business, and in the production of the proper kind of work.

The best hands are invariably the cheapest, and a few dollars extra invested as wages pays much better than advertising and filling the places of competent hands with those wholly unacquainted with the shop and your manner of working.

The employer should make himself acquainted with the quality of all the material he uses, and *purchase them himself* in as large quantities as circumstances and the wants of his business may require. The habit of buying by small quantities, and of sending boys after what is wanted, is productive of no good to any one, only the dealer, who, in most instances, takes some advantage, either in quality or price of goods. Better select some honest dealer and send direct to him than trust to an incompetent person. When living at some distance from the market, time and money are often saved by sending your orders to some disinterested person in whom you have confidence in their ability to judge of the quality of the articles desired.

Practice strict economy in all departments; see that your materials are used up closely as possible, and be careful not to accumulate a large quantity of unavailable stock. Endeavor to produce a neat, convenient class of work, that will find a ready sale.

Beware of Sharpers.—Many persons are continually on the watch for men commencing in the business. Frequently livery stable men profess to have great influence in controlling custom apart from their own, and ask for special favors on that ground; and in many instances the new beginner finds that he has, after being induced to do his work for one-third less than it was worth, lost the most of the balance, and his customer leaves him to try the same on some one else. Better do less business, and be sure to get good prices, and as much as possible sell for cash; at all events settle often.

Be careful of your Credit.—It is a mistaken idea for any man to think it to his advantage to defer paying for his stock until he is forced to do so. It is much better to *always* buy for *cash*. A few cents per foot discount on leather, or a fraction per pound on iron, and all other kinds of material, will tell in the course of the year in the profits. There are very few that have the means always at hand, but next to paying cash fix the time for your payments when you know you can meet them, and regard your promise as sacred. Let those with whom you deal understand that you are prompt according to agreement; and should necessity require it, you will have many favors shown you that you otherwise would not receive.

A dollar saved here and there by paying cash, or meeting your notes promptly, will help to swell the profits of each succeeding year, and in time place one in easy circumstances. "Wealth is acquired by small but oft-repeated accumulations." The gross amount of these sums will be decided by your skill, industry and frugality, for, "though a man earn much, yet if he spend all he will grow no richer." There is a class of men who are prepared to pay promptly, yet ruin their credit by negligence, and assist in adding to the cares and perplexities of business life.

A man of good moral character will be mindful of his promises, and if misfortune overtake him, will find many a helping hand to assist him to rise again.

OUR FASHION PLATES.

The many letters, we are receiving, of appreciation of our efforts to furnish a live publication give us great encouragement, especially the encomiums bestowed on our selection of fashion plates.

We are sparing no pains or expense in furnishing designs calculated to meet the wants of the trade in the different sections of the country, and we think the present number will bear favorable comparison with its predecessors. The Landaulette from the well-known establishment of H. Killam & Co., New Haven, Conn., (the great carriage manufacturing city of the United States,) will doubtless be highly prized by all builders of that class of work. We consider it quite an honor to the JOURNAL to have such contributors. We have the promise of a design for next month from another of the first-class establishments of this noted city, and our patrons who manufacture heavy work may look for something more than ordinary.

We are not given to boasting, but we do feel a degree of pride when we consider the position to which the JOURNAL has attained. Men that one short year ago looked upon our publication with a degree of indifference, seeing the advancement we are continually making, are now ready and anxious to render us all the assistance they can, and we are obliged to ask our friends to bear with us in the publication of their designs. Our aim is to get the best, and sometimes it is very hard to decide from so many furnished us, which will be the most useful to the craft generally.

We hope, however, our friends will not withhold their contributions, but would suggest that they send with them a fuller description of their manner of construction, and also state whether they have any objection to credit being given them for the design. It is better to draw your sketches one-half inch to the foot, but we always refer them to our draftsman for examination and redrawing if necessary; so that if you can do nothing more, send the rough sketch, and we will put it in shape.

Our march is onward, and we try to improve on each succeeding number.

Continue to send in words of encouragement as we may deserve. It prompts us to greater exertions, and enables us to surmount difficulties we otherwise could not do.

☞ If you wish to make any Jump-Seats, read Kimball's advertisement first.

NOTES BY THE WAY.

We bade adieu to home and dear friends on the morning of the 7th of April, took the cars at the Berks street Depot, Philadelphia, having once more donned the canvasser's harness. While we are fond of traveling, and ever anxious to visit strange cities and towns, and gaze upon the varied and beautiful scenery of our beloved land, we confess to a weakness for the pleasures of the home circle. It is *not* a pleasure to say good-bye to the dear ones at home, and part with those whose streaming eyes bespeak an affection widened and deepened by years of social intercourse through the lights and shades with which every household is colored. But, business must be attended to. Sadly, we took a seat in the car, and at 8.45 A. M., the train moved off, and we nerved ourself up to the work that laid before us.

Doylestown, Pa., was the first town on our list to be visited. On the route we were delighted as we viewed the ever-varying landscape. The farmers were as busy as bees, preparing the soil for the seed which, when planted, and the growing crops properly attended, should give them a bountiful harvest. The promise that the early and later rains should be given was being fulfilled. The sun was shining brightly over us, while in the distance the heavy leaden-colored clouds were being driven northward, dropping down their fatness upon the land in long dark sheets of pure water. The fields of newly turned earth were refreshing to look upon. The plow horses marching side by side, bowing their necks, and stepping gracefully and majestically along, seemed to rejoice at the return of Spring, and to feel a pride in being permitted to aid man in his good work. May they never again be taken from the plow and equipped to *serve man* in the destruction of his fellow.

We arrived at Doylestown at 10.30 A. M. Canvassed the town, and were off again at 3.10 P. M. for Lansdale: left Lansdale at 6.15 P. M., arrived at Bethlehem 7.30 P. M.

Bethlehem is a flourishing city, is well laid out and handsomely built. "It was settled by Moravians, who fled from Moravia, in Germany, to escape persecution, and made their first settlement in Pennsylvania, in 1740. After they had established themselves at Bethlehem long enough to become familiar with the Indian language they pushed eighteen miles northward, where the rapid Mahanoy joins the Lehigh, and made the first settlement in a north direction, in Pennsylvania, above the Blue Ridge. This philanthropic settlement was named 'Gnad-en-Hutten,' or 'Huts of Mercy.'"

At Bethlehem, there are four carriage shops and three or four wagon shops, where there is more or less carriage repairing done. We have since visited Allentown, Easton, Belvidere, Hackettstown and Stanhope, N. J. From Stanhope returned to Washington on the Morris and Essex R. R., and at Washington changed cars, taking the Delaware, Lackawanna and Western R. R. for Stroudsburg, Pa. This place has gained considerable notoriety of late by what is well known as the Brodhead murder, the particulars of which are no doubt familiar to all.

After calling on the carriage-makers we turned our face toward Scranton, which is 52 miles north of Stroudsburg. Scranton contains about 45,000 inhabitants. Providence and Hyde Park, formerly separate boroughs, are now included within the city limits. It owes its rapid growth and wealth to immense anthracite coal deposits through the Lackawanna Valley. It is situated in what is termed the "third Northern or Wyoming and Lackawanna coal district, embracing the Scranton, Pittston and Lackawanna coal." After a tedious ride between the mountains we were enlivened by a sudden view of the city spread out in the valley below us. At the depot, the throng of passengers, the bustling locomotives of the coal trains, the smoke and noisy steam escape pipes, bespoke a lively, energetic, hard-working community. T rail is manufactured here, and they claim to have the most powerful machinery on the continent. The carriage business is divided up among several small shops, still there are some good buggies built. The JOURNAL met a hearty welcome here, as well as in all the towns previously mentioned.

From Scranton we called over to Carbondale, which is 16 miles distant. Leaving Scranton at 4 P. M., we arrived at Carbondale at 5.45. The Delaware and Hudson Canal Company have provided passenger cars to accommodate the travel between these points. The cars are about one-third the size of regular passenger cars, and pass over the tracks laid for the coal trains. We had the novel pleasure of a ride of ten miles without the aid of a locomotive. The iron horse took us out about six miles from Scranton, when he ran off on a switch and left us to our fate, snorting triumphantly, and seeming to say: "I leave you to the inferior stationary engines at the summits who do a good work, but are content to remain in one place, and do not travel as I do, and see something of the country." Now, we can't say that we felt safe in the hands of these monster engines at the summit. The bell sounded, the escaping steam on the summit showed that the power was being applied to us, and in a jiffy we were raised to the top. Well done, we thought; so far so good. But at the summit we were deserted by the stationary engine, and now we thought, as we gazed below at the descent, better a *stationary* engine than *no* engine at all. But the brakes were applied, and we descended the incline by *gravity*, going at the rate, we should judge, of eight miles an hour, and thus we were lifted up the mountain sides and dropped down by gravity, on the side toward Carbondale, reaching that pleasant village at 5.45 P. M. There are two small shops here, doing but little carriage work, nevertheless they took the JOURNAL. Returning to Scranton the day following, we started for Great Bend; from there to Binghampton, Owego and Ithica, N. Y., where we are now writing by lamp-light, after having spent a day visiting the romantic scenery on Six Mile Creek, which, with six other streams, the Ithicains challenge the world to equal. C. W. V.

TRAVELING AGENT.

Mr. C. W. Veatch, our traveling agent, is again on the tramp, looking after the interests of the Journal. Although in nearly every town of note it has preceded him, yet, we think a personal visitation will be the means of not only enlarging our subscription list, but will draw closer the ties of friendship that bind us together; and any kindness shown to him, (for he is every way worthy,) will be considered by us as a personal favor, and remembered as though given to ourself. We hope our friends and patrons will feel free to counsel with him in regard to the wants of the trade, and any suggestions made will be duly considered, and, if thought advisable, adopted. We, of course, view the situation from a different stand-point, having the interests of the whole country at heart, and by getting suggestions from different localities, we are better able to judge of what is needed.

We do not profess to be of that class that know all, and not willing to listen to others; but being responsible for the character and usefulness of our publication, we are obliged to be very careful, and weigh well the suggestions before deciding.

We trust a visit from Mr. Veatch will be productive of good to all with whom he may come in contact, and be the means of greatly aiding the interests of the Journal.

CORRESPONDENTS.

We are very much pleased to see the interest manifested on the subjects of "English *vs.* American Varnish," and also on "Setting Axles." They are subjects in which every coach-maker should feel a deep interest. Those who have expressed their views through the columns of the Journal, as will be perceived, differ materially. We would be pleased to hear from others on the same subjects, for discussions on the principles of coach-making in the different branches are productive of much good to the craft.

NEW ADVERTISEMENTS.

S. N. Brown & Co., Dayton, Ohio, regardless of expense, are determined the readers of the Journal shall know that they are prepared to furnish the coach-makers of the United States and Canada with the best wheels and wheel timber that can be produced, and from the reputation they have already attained, and the means they are making use of to be made known, they must have a very extensive establishment; but we shall be much mistaken if their enterprising spirit will not cause them to greatly enlarge their facilities for filling orders. The colored leaf must and will be seen by every reader of the Journal. Don't fail to remember what you read thereon.

Charles M. Foulke, of this city, has secured letters patent on the peculiar construction of a carriage wheel, claiming for it great superiority over the ordinary wheel. Mr. Foulke is one of our best mechanics, having acted as foreman for Wm. D. Rogers for a number of years, and for the last 8 years doing business in his own name, and has made for himself a reputation for first-class light work second to none in this city. Being a hard-working, thorough mechanic, his invention must necessarily be important to all manufacturers. See advertisement.

C. P. Kimball Co., Portland, Me, offer for sale their patent jump-seat carriage, or the right to make the same. It is to the special interest of every carriage-maker to carefully read their large advertisement.

James Fitzer, of this city, is prepared to furnish coach-makers and others with a first-class article of carriage mountings of all descriptions. We hope our friends will give him a trial, for we believe they will find him an upright, fair-dealing man, and be well satisfied with his work.

Elizabethtown Steam Manufacturing Co., at Elizabethport, N. J., claim to have the largest establishment of the kind in the United States Their reputation for first-class stock is good, and we have no hesitation in recommending them to the readers of the Journal.

Barber, Sheldon & Co., Auburn, New York, manufacturers of the celebrated *Archimedian* axle. This axle is so well known that it is unnecessary for us to say anything of its merits. Their card is in the Journal.

English & Mersick, New Haven, Conn., general dealers in carriage goods and manufacturers of Bradley's Patent Top Prop. See engravings of same in their advertisement. If you desire to keep posted, send for their price list.

New Haven Folding Chair Co, New Haven, Conn. This may seem an odd name to be of interest to coach-makers, but a glance at their advertisement will satisfy all that they cater to the wants of carriage-makers, and are prepared to furnish *all kinds* of manufactured wood work. They will be pleased to furnish their price list on application. It will cost you only three cents, and may be hundreds of dollars advantage.

Flesche & Perpente, New Haven, Conn., manufacture all kinds of ivory and fancy goods for carriages, and manufacturers would do well to remember them when finishing first-class work. We have the assurance from those who have long known them that they are reliable men, and your orders will be promptly filled at fair reasonable rates.

H E. Murray, Chester, N. Y., comes before our readers this month with his patent carriage-seat clamp. He has promised to send a cut to accompany his advertisement in time for next number; in the meantime invest three cents, and send for circular, giving prices and full description.

R. H. Wright, New Bloomfield, Penna., also claims the attention of the trade to his new and improved method of putting on top. He claims for it a continued fullness of the leather, preventing entirely the possibility of caving in between the bows even after years of service. Send for full descriptions. This certainly is something much desired, and if the invention is what is claimed for it, it will be very acceptable to all coach-makers.

☞ We hope our friends will not forget, when looking at our new advertisements, to read the old ones. Some of them have been before our readers ever since the Journal started, and have grown in size with the Journal, and the word comes to us when their time runs out—"continue another year; or, what is better—"increase my space to double the former size." We trust they are all receiving ten-fold for their investment.

* * *

☞ If you want a brush just suited for Piotrowski's Permanent Wood Filling, send to C. D. Thum, No. 150 North Third Street. See advertisement.

☞ All kinds of carriage wood-work can be obtained from New Haven Folding Chair Company. See advertisement.

Fashion Plates Explained.

COUPE.

Plate No. 29.—The noticeable features of this superior drawing are the straight lines, the lightness of front pillar, and the beautiful and symmetrical appearance of the boot and lower back quarter. It is designed for a child's seat front, constructed in the same manner as described in last number, (Plate, No. 26, on page 102,) giving ample room for the back seat.

Dimensions: Width of Body: 52 in., 4½ in. turn-under. Boot: 28 in. Mouldings: ½ in. deep, chamfered. Hubs: 7 by 4⅜. Bands: front, 3⅛; back, 3⅝. Spokes: 1 3-16. Tire, 1⅓ by ¼. Axles: 1¼. Springs: back, 39 long, 4 plates, 1½ in.; front, 38 long, 4 plates, 1½ in. Wheels; 3 by 4 and 3 by 10. Track: 4 feet 10 in.

Trimming: The material mostly in vogue is satin, of what is called the Bismarck shade of brown, with spring back and mirrors on each side. This class of work generally passes into the hands of people who indulge in the *luxuries* of life. It is a great favorite with ladies, and for this reason the materials selected should be the richest, and great attention ought to be paid to the matter of correctly matching the lace to the trimming goods, and the trimmer must always bear in mind that soft, luxurious, downy feeling linings, are most to be desired in a coupe.

Painting: Panels: *purple lake*, over ground of Prussian blue, lining the inner and outer edge of flute with fine line bronze, making a double line. Carriage part: black; stripe with double fine line bronze, to correspond with body.

Mounting: Gold; door handles, drop pattern, new style.

KILLAM LANDAULETTE.

Plate No. 30.—Having seen this job in the warerooms of Messrs. H. Killam & Co., New Haven, Connecticut, it struck us as one of the most stylish and superbly finished jobs it has been our good fortune to behold, and through the kindness of Mr. K., and the valuable assistance rendered us by his foreman, Mr. Hildebrand, we are enabled to present it to our readers.

Although it presents a beautiful appearance, as engraved, yet the beauty of the job has to be seen to be realized.

We had purposed giving an additional view of this design, with the top lowered, but knowing that manufacturers would understand it from the explanations here given, we have used the space for more important illustrations.

The front is taken off entirely, and the back lowered, giving it the appearance of a calash top.

The front is circular, with heavy beveled plate glass. 21 inches wide, with mirror in front, between the glass in a heavy black walnut frame, embossed with gold.

The front loop is an extension of the rocker plate, which is put on before the body is set up, continuing the sweep of the rocker.

The boot is detached; the top part round. The lower is also rounded, so that it comes in line with the top and rests on the gear.

The carriage part is all iron, and for originality and beauty is hard to be excelled. It is well worthy the study of manufacturers and workmen. It is all iron, with but one bolt in the carriage part, that is the king bolt; all other parts are forged solid or welded together, so that it makes but two pieces in the whole front, an engraving of which will be found elsewhere in this number. This carriage was built for a wealthy man in Chicago, and our friends there will have a chance of seeing for themselves. Price, $3,000.

General Dimensions: Width of body outside: back, 41; middle, 53; front, 51. Moldings: $\frac{1}{2}$-inch deep, chamfered. Hubs: $8\frac{1}{2}$ by $5\frac{1}{2}$. Front and back bands $3\frac{3}{4}$ inches. Spokes: 1 7-16ths. Tire: $1\frac{1}{4}$ by $\frac{3}{8}$, steel. Axles: $1\frac{1}{4}$. Springs: back, 34 long, 5 plates, $1\frac{3}{4}$; front, 36 long, 5 plates, $1\frac{3}{4}$. Wheels: 3 ft. 8 and 4 feet. Track: 5 feet.

Trimming: Crimson satin. Tufts, crimson and white; head-lining, back and quarters tufted. For further explanation in regard to manner of trimming we would refer to explanation on page 45, December number of present volume. Ivory pull handles and card case, carved. Speaking trumpet with ivory mouth-piece, also bell under driver's seat with ivory pull handle attached.

The ivory trimmings in this carriage, we understand, were manufactured by Flesche & Perpente, (whose advertisement will be found in the Journal,) and cost over $100, making a beautiful display.

Mountings: Heavy gold plate. Outside handles, finishing moldings, buckles and centre ornament on *Killam's* patent elastic cross straps, plated.

Heavy gold-plated pole chains.

No. 2 Eureka lamps, black, with gold monogram on same.

Painting: Body: dark rich lake, fine gold leaf stripe. Gearing: brilliant carmine: striped, broad black, split $\frac{1}{4}$-inch gold leaf edged carmine, distant fine white line. Monogram on doors.

DIAMOND PHÆTON.

Plate No. 31.—For lightness and stylish appearance our artist has succeeded admirably in the production of this doctor's buggy. The side panels being in diamond shape gives it a rakish and genteel appearance. We have given in two previous numbers designs especially adapted to physician's use that have been very highly complimented by our patrons, and we flatter ourselves that the present engraving will be equally well received. We have inserted the oval glass in side, which can be left out if desired; we, however, think it adds to its general appearance, as well as being very convenient for its occupant Sides of body taken from white wood or poplar. Panel in drop of rocker swelled, with square corner. High back.

Dimensions: Width of body to take 43 inch bows. Hubs: $6\frac{1}{2}$ by $3\frac{7}{8}$. Bands: front, $2\frac{5}{8}$; back, $3\frac{1}{4}$. Spokes: 1 inch. Tire: $\frac{7}{8}$ by 3-16ths. Axles: $\frac{7}{8}$, steel. Springs: front, 37 long, 3 plates, $1\frac{1}{2}$; back, 38 long, 3 plates, $1\frac{1}{2}$; (this should be heavier steel than the first.) Wheels; 3 by 10 and 4 by 2. Track: 5 feet. For hard service, the running gear should be made proportionately heavier than dimensions here given.

Trimming: This style of carriage looks well trimmed with leather, and we would recommend the "Grecian Bend" style of back, (given in March number, page 92,) either as a drop or stationary back, the upper roll to be continued as an arm-piece. As physicians are out in muddy roads a great deal, their carriages require more washing than those used by almost any other class of persons; for this reason we would suggest that the fall be sewed to the cushion, and the seat painted, (instead of lined.)

Mounting: Silver. Inside of bands and face plates plated, axle and top prop nuts, capped. Octagon, shaft and swingle-tree tips.

Painting: Body: Panels, bottle green; stripe inner edge of mouldings dark carmine. Gearing: dark green to match; body: stripe dark carmine.

LAFAYETTE FALL-TOP.

Plate No. 32.—A very plain, easily constructed buggy, and one that will look well, however much fashions may change.

For dimensions we refer to Velocipede Buggy in the last number of Journal.

Trimming: Standard blue body cloth, covered buttons and patent leather welts. Miller's Drop Back, (explained on page 112) would look well for this job. Fall sewed to cushion; cushion squabed top, and mock straps.

Painting: Seat-panel and belt, carmine; rest black. Mouldings: light carmine, with fine line bronze. Gearing: carmine, with broad stripe dark brown, with bronze line nearly an eighth of an inch.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

DIALOGUE BETWEEN A CARRIAGE-MAKER AND CUSTOMER.

BY AD. MULLER.

Translated from the "*Revue de la Cazeonovic*," a Paris Publication, Devoted to the Interests of Carriage-Making.

Customer.—I wish to have a carriage built in conformity with my ideas. I wish it to be original, even eccentric; for the rest I will give all the indications, and I also desire to have the plan submitted to me before commencing the work, so that I can suggest all the alterations which my fancy should require. Are you willing to build this vehicle for me?

Carriage-Maker.—I am perfectly willing, but under the condition always, that your ideas, your taste and fancy are within reasonable limits.

Customer.—The limits of my fancy, I suppose, are of little concern to you, provided that I pay.

Carriage-Maker.—They are an important matter for me.

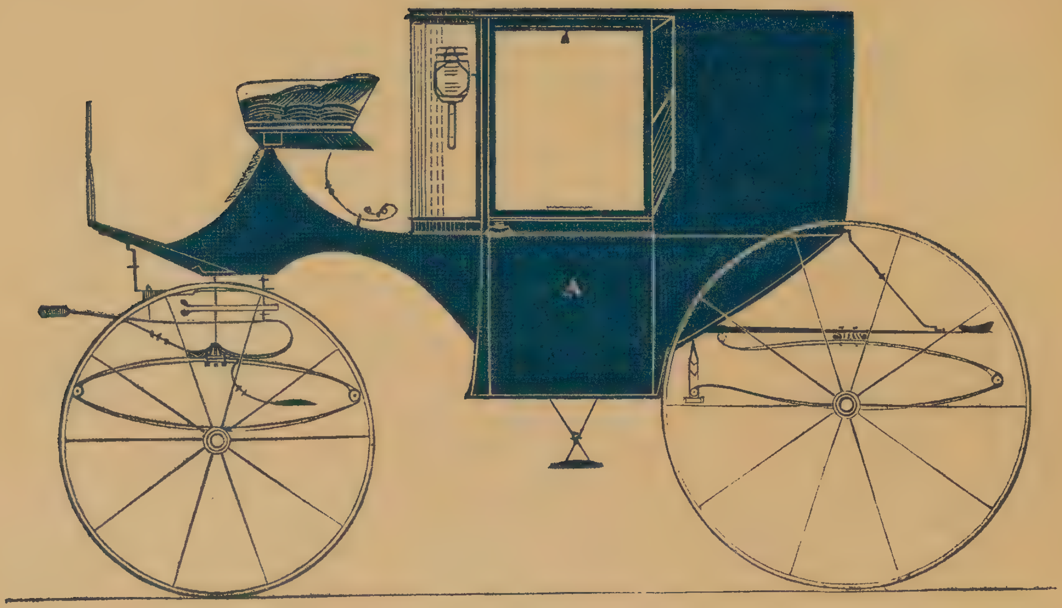
Customer.—This resistance of yours I can only explain myself by an excess of self-love, which, in my opinion, is pernicious to your interests. So, for money, you are not willing to build me a carriage suiting my fancy. I possess some self-love, too, and am free to say, that my taste is equal to yours.

Carriage-Maker.—This point might be discussed yet.

Customer.—Well, let us discuss it, and you may first explain to me the reasons for your refusal.

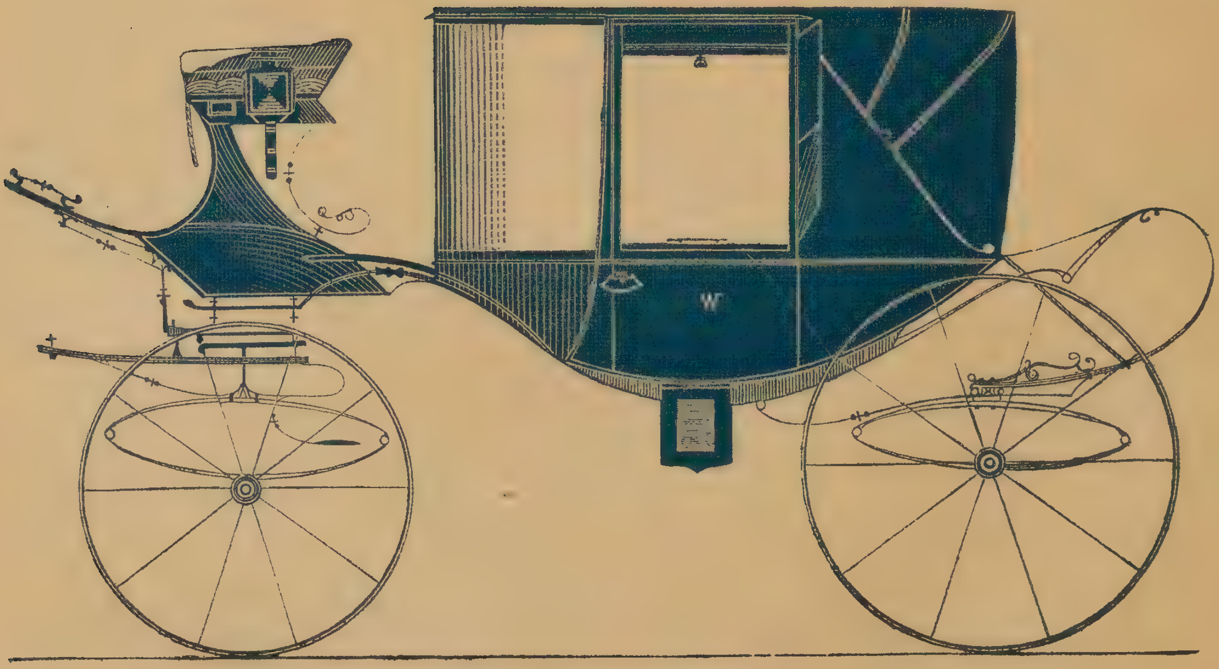
Carriage-Maker.—My personal interest first, and then yours.

Customer.—I find it very natural that you put your personal interest before mine, but this answer is not satisfactory to me; show me how your interest could be interfered with in this case; what, on the other hand, concerns my interest please do not trouble yourself too much about it.



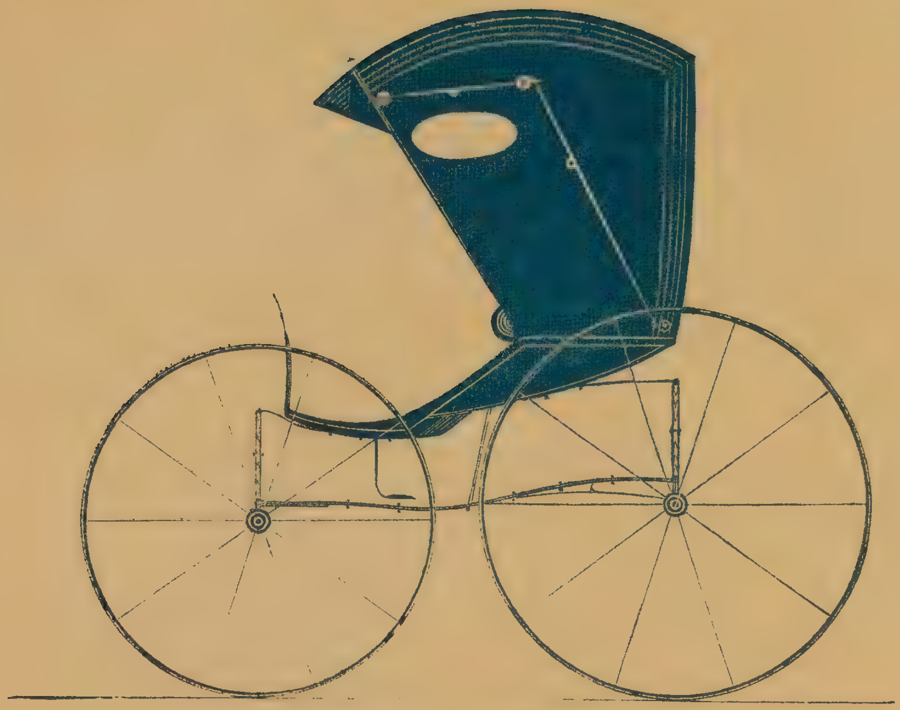
COUPE.

Plate No. 29.—Half-Inch Scale.—Explanation on Page 117.



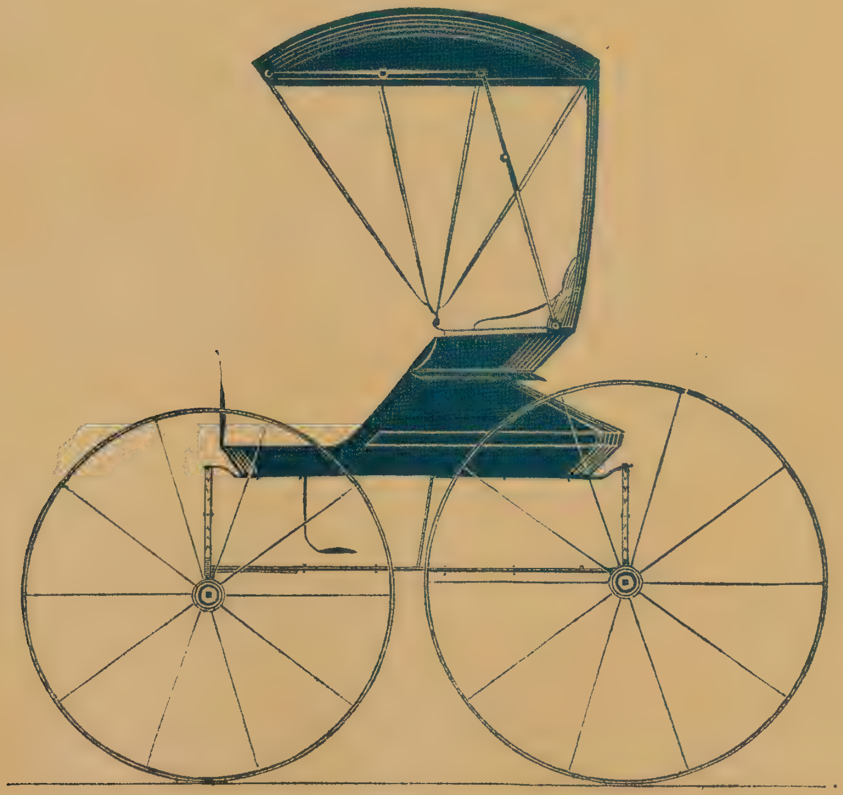
KILLAM LAUDAULETTE.

Plate No. 30.—Half-Inch Scale.—Explanation on Page 118.



DIAMOND PHÆTON.

Plate No. 31.—Half Inch Scale.—Explanation on Page 118.



LA FAYETTE FALL-TOP.

Plate No. 32.—Half-Inch Scale.—Explanation on Page 118.

Carriage-Maker.—You promise not to get angry?

Customer.—I give you perfect freedom, and wish you would speak plainly.

Carriage-Maker.—You pretended that your taste was equal to mine, and I said that this point could be discussed. To get a basis let me suppose that you have for things in general the same quantity of taste as myself.

Customer.—Accorded

Carriage-Maker.—You also admit that taste is acquired by study; for, if otherwise, taste only would make great artists.

Customer.—I agree.

Carriage-Maker.—Parting from this you must easily get convinced that my taste in carriages must be far superior to yours, since for thirty years this is my special occupation. I have studied the history and progress of my trade, have read all the publications treating on it; in short, so many years of study and work—as jour., foreman and boss—all this has given me a certain amount of knowledge which I propose to compare with yours.

Customer.—Please continue.

Carriage-Maker.—To do this I must know, approximatively, the time during which you have been engaged in this business; I think about three months.

Customer.—About so long.

Carriage-Maker.—Mathematically speaking, thirty years are to three months like one hundred and twenty to one; or applied to our question, my experience and taste are one hundred and twenty times greater than yours.

Customer.—I expect the conclusion.

Carriage-Maker.—O! I foresee what you are going to reply; a carriage is both a machine, and an object of art; he who superintends the building must be an artist and a mechanic; a carriage must be of the present style, and combine all the progress and improvements of the day; the architect directing the construction wants two essential qualities: 1st, a perfect knowledge of his trade; 2d, a great liberty in the arrangements and application of the different parts.

Customer.—Is this all?

Carriage-Maker.—Finally, I will speak of the customer's side. The world can change its production to the infinite; but as you find beautiful faces under the most different physiognomies, so beautiful carriages exist under all the different styles; the choice of style, color, and other attributes belongs to the party ordering; but to the builder belongs the combination, agency and proportion of the different parts in the construction; but if the former steps into the dominion of the latter, and you, sir, with an experience of three months intend to do so, and if the bidder is feeble enough to submit, such a course is pernicious to both interests.

Customer.—I hear with both ears.

Carriage-Maker.—Such a production, the fruit of so little experience, would necessarily have several faults, but even when this piece of work would give satisfaction to the customer, and for a few days some persons, knowing that he himself was the architect and author, would compliment him, there would afterwards come the critic, point out the faults, and cite the vulgar phrase against which nothing can be said: "Look, here is a carriage that will have no young ones;" in other words, it is not the production of good taste, and will not be repeated.

Some months elapse; the same critic will get uniform, and the owner, wounded in his ambition, will dispose at a low figure of his new turnout; for him it was a matter of pecuniary loss, and for the builder, O! for him, he will find himself in the same position as the author, whose works are sold by the pound to serve as wrapping-paper for sugar, coffee and tea.

For the Coach-Makers' International Journal.

LEWISTOWN, FULTON CO., ILL.,
April 12, 1869.

EDITOR INTERNATIONAL COACH-MAKER—*Sir:*—I have been receiving your valuable journal for some time, and I am heartily pleased with it. It was a mere chance that it came to my sight. I first saw a notice of it in the *American Phrenological Journal*, and as I am always on the lookout for anything in the reading line that relates to mechanics, I obtained a copy of your paper through our newsman, and have since continued it, and shall be a patron as long as it continues, as it does now, approaching perfection. Of course, we must not think of everything that is treated in its columns as being just the thing, but it is so far ahead of everything else in its line that it is a god-send to the moderate carriage builder. I know one man in this county, that, from a good wood-worker—by following the instructions laid down by you—has become a very fair carriage builder. He says he has learned it all from your journal. He takes a hand in every branch—from the rough wood to the final coat of varnish. I am only a painter, but everything relating to the business I read with pleasure.

Carriage making here is in a primitive state, from the fact that the most of our wealthy people have come from the East, and the old notion that local mechanics are not so good as in the country where they formerly lived is entertained, and consequently the showiest work is imported But we have good workmen of all branches, and good materials, and can do good work. Peoria, Ill., has a firm which cannot be surpassed for style and quality. Galesburg, Ill., has a No. 1 establishment, also Monmouth, Ill. And our sister town of Canton turns out some pretty fair family carriages. The greater amount of Eastern sale work is not durable enough for this climate and rough roads.

One great drawback we painters have is just what you mentioned in your last number—lack of shop room, slight ventilation, and, in short, little comfort or convenience. We are expected to do *everything*, and on very short time, and to do it well and showy. Our common wagons have to be finished up equal to a street car or circus wagon. I just finished a job—top-box, spring-seat farm wagon—carriage: light chrome yellow, double striped, two colors. Body: Chinese vermilion, side scrolled, with landscape, fancy corners to the panels, &c. So you can see we go in for style.

Does any person in Philadelphia keep scroll patterns of large size, suitable for wagon bodies, such as are used on street car sides?

I will close for the present.

Yours, &c. J. H. G.

For the Coach-Makers' International Journal.

PHILADELPHIA, April 17, 1869.

MR. EDITOR:—You will greatly oblige by giving this short communication space in next number of JOURNAL, if not too late.

Complaints having been made of extra charges for my brushes, as well as the difficulty of procuring them when ordered through other parties, I would request persons ordering Thum's Half Elastic Varnish or other Brushes, to send their orders directly to 150 North Third street, stating where they desire the goods sent, and which will be so delivered at the price quoted in our regular "Price List." Any orders left with the proprietor of this JOURNAL, will likewise receive prompt attention. CHAS. D. THUM.

☞ Don't fail to read English & Mersick's advertisement.

☞ If you wish to make any Jump-Seats, read Kimball's advertisement first.

For the Coach-Makers' International Journal.

ENGLISH vs. AMERICAN VARNISH.

NEW YORK, April, 1869.

MR. EDITOR.—I have been very much amused by, as well as interested in the views of your correspondents in relation to varnishes, "English *vs.* American," for coach work, for several months past, as they have appeared in your excellent JOURNAL. Yet I have failed to find anything like a reasonable solution of the subject, or a satisfactory answer to the inquiry of your Kankakee correspondent.

The subject of varnish and varnishing is the most important branch of all in carriage building, but as far as my experience goes has had the least attention.

There is, without doubt, a preference for English varnish for finishing-coats, humiliating as it may be for an American to say it, and to those who do not take the trouble to investigate, it is satisfactory. The reasons for that preference are many; in the first place, the purchaser of a carriage begins with the question, "Is this carriage finished with English varnish?" or something to that effect. Secondly, the manufacturer has a pride in saying he finishes all *his* work with English varnish, and it must stand. While in the third place the painter says he cannot finish with anything but English.

Now, the facts are these: the purchaser knows nothing of the merits of either English or American, and the builder cares nothing about it, only as far as his work looks well; and the painter, from habit, becomes settled in the conviction that there is nothing but English to finish the bodies with. Yet he is willing, not only to work the English as it ought to be worked, but knows he cannot make a good job unless he thoroughly and perfectly prepares it for the English varnish; then he must put it on just so, give it *its* own time to set, dry, and the proper washing. The running parts are finished generally with American varnish, and in a majority of cases it is put on by inexperienced painters or apprentices. The purchaser, builder and painter act upon the principle that if the bodies look nice, that is all that is required.

Now, the fact is, that the running parts require as good, if not better, varnish than the bodies, as they are exposed to more wear, mud, &c., and are oftener cleaned, or should be; for if they are not cleaned or washed often, the mud and dirt remaining on them destroys the varnish sooner than anything else; and when the carriage is carefully examined it is found that the American varnish on the running parts had perished, while the English on the body looks bright and perfect—the one is condemned, the other praised.

These are facts, and will remain the same until our coach painters become willing to use American varnishes with the same care, in the preparation of the varnish room, and their work for putting on the finishing coat, also to give it the same *time* to set and dry, and will use it as thin as they do the English. The American varnishes are compelled often to cover a multitude of short comings, as every coach painter knows, the most common of which is imperfect rubbing down, and satisfies his conscience with the mental excuse: "Oh! well the carriage varnish is so much heavier than the English finishing, that it is not necessary to rub it as close, &c.

Now, Mr. Editor, I would like some of these practical painters, who cannot finish with anything but English varnish, to change the tables, and put English finishing varnish on the running parts, and the best American varnish on the bodies; I say best American, for there are manufacturers in this country who make finishing varnish that will stand as long, and cover as much surface, and give as good a finish, as any English varnish, provided they are used as carefully, and the work prepared as well as it *must* be for the English.

I have no doubt that your Kankakee correspondent can procure such a varnish from manufacturers who advertise in the COACH-MAKERS' JOURNAL.

I may, if you think it worth the space in the JOURNAL, have something to say hereafter on the subject of varnish rooms, the present and proper mode of preparing them, also the effect of the atmosphere upon varnishes and varnishing.

AMERICAN.

For the Coach-Makers' International Journal.

THREADS FROM THE MEMORY OF AN OLD CUSHION.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER V.

HOW I LOST MY NEXT BUTTON.

Continued from page 105.

I remained in my new quarters only about one week, which was a very dull one to me, as I was deeply interested in regard to the fate of poor *Tim Dunigan* and the rest of my friends; and this present way of being crowded into a small tent, with three or four dirty soldiers' blankets piled on top of me all day, and a dirtier soldier's head on top of me all night, made me begin to hope for a change. At the end of the time spoken of, the regiment changed its location to one below the city, where other troops were in camp, and where *my* crowd was put in with others to form a brigade. Directly back of our camp was a battery of artillery, and the men used to come over and play cards in our tent *for money*, and many a night and day I was used as a seat for a big, swearing artillery-man, while he played poker with three others. This fellow appeared to win more than any of the others, and, one night when money was getting scarce, (for he had it nearly all,) he proposed to play what he called "*a square game of euchre*, and he would put up five dollars against that ar cushin I'm a sittin' on." "That's a go," answered my owner, and in ten minutes I had again changed owners. The big artillery-man had won me; and with a big oath, said he, "it's jist what I wanted, fur thar yaint nary cushin on our caisson, and besides, it 'll do me fur to sleep on"—and I was lugged off to the camp by him. He evidently regarded me as worth taking care of, and it was more to my notion to be used for what I was legitimately intended, instead of grovelling in the dirt of a soldiers' tent, and when he laid me on the seat of the caisson, I felt better. Them artillery were being put through a course of sprouts in the shape of drills, parades, &c., and when not drilling or parading, and learning the art of "glorious war," they were deeply engaged in their favorite employment of "*raw poker*," unless during the few hours when they *tore themselves* away from it to sleep.

But soon their little game was disturbed by an order to get ready to strike their tents and be ready to move at an hour's notice. The time had come when playing soldier was "played out," and they must prepare for the stern realities of the battle-field. The cause of this sudden movement was the fall of Fort Donelson, and the fact that the Yankee gun boats were in the Tennessee River, and that Yankee troops were supposed to be moving to occupy some point on that river—probably Pittsburg Landing, near Corinth—for the purpose of severing communications between the South and the Confederate capital at Richmond, and the men seemed to understand the importance of keeping the railroads open at any cost. The next morning the order came, and within the hour the brigade was in motion for the railroad depot; but in consequence of delay in not having cars enough on, our "lay out" (as the men called the battery) had to remain all night in a *cotton press* near by. Those cotton presses were first-rate places to put soldiers in, as they were enclosed by high brick walls; all around were sheds under which the cotton bales were stored preparatory to being repressed for shipment to Europe—for the cotton bales, as they come from the plantation, are very large and clumsy in appearance—but here they are placed in the steam press and reduced fully one-third in size. The soldiers found good sleeping places on these bales, and the officers, by keeping a guard on each gate, were able to keep the men from straggling about and getting drunk. About daylight the cars were reported ready, and in a short time we were tearing along the road, *bound North*—the men indulging in hopes and speculations of the future, and wondering how many of us will ever see New Orleans again. Well, some of them did, but the majority of them done the other thing.

That battery did most certainly *distinguish* itself (I mean *extinguish*) literally; for, of all the "lay outs" that ever faced the *Yanks*, (as they called them) this battery was the fastest. They were, in fact, perfect flying artillery. Not that they ever made the enemy fly—or that the shot and shell ever flew fast and furious from the muzzles of their heated guns—oh, no. But I will not anticipate.

In due time we arrived at Corinth. The men were completely used up, for our whole journey was a perfect ovation—every village we passed through sending its groups of beautiful young ladies and liberal handed gents to cheer the gallant braves of M——'s artillery, and to offer them refreshments. And these refreshments were offered so often, and in such liberal quantities, and the towns and villages were so numerous, that the boys were, as a general thing, pretty well refreshed during the whole trip, for they were invariably refreshed, at every stopping place, to the extent of a *canteenful*, besides all the side drinks they could hold, so that hardly a man of them drew a sober breath for two days and three nights.

"Hurrah for the cannon boys!" was the welcome at every stopping place. "Them yar is the things 'll settle the Yanks. "Them's the boys 'll show 'em the way to Dixie!" "They'll plant 'em!" "Take a drink, boys—we're agoin' next week!"

The whole population, it was evident, had the war fever, and the women were the maddest. Nothing was too good for the soldier, and nothing too bad for the man who was not one. Their liberality and hospitality were unbounded, so that when M——'s Battery got to the end of their journey, I am certain that nine-tenths of them were fit subjects for treatment for "*mania-a-potu*." In short, the quantity of whiskey they had drank was enormous, and nearly every man had yet his canteen full.

Next morning we were marched to a piece of woods about two miles from Corinth, and ordered to camp. Well, the underbrush and trees grew so thick that it was necessary to chop a space large enough for the camp. The infantry were already encamped, but when our crowd were ordered to clear away for their camp, 'twas no go. Old "John Rye" had been there too long, and they could not, and would not work. Night came, but yet everything was in confusion. They laid down wherever they pleased and slept. When morning came—came with it an order to *march*, and the horses were hitched up, and away straggled M——'s Artillery (the cannon boys) for the banks of the Tennessee River, distant twenty-one miles. It was reached that night. Having traveled over a rough, hilly, unproductive country, generally very sparsely inhabited, we went into camp on the bank of the river. Tired and worn out the men were, but I, Mr. Pumice, felt very well, although I had been set on all day by a rough, drunken, swearing soldier; still, I had been sat on, and it made me feel better. Next morning I was indulging in a dreamy thinking of myself and my friends—*poor Tim and the gray*. I was awakened from my reverie by a sudden commotion in the camp, and cries of—"The gun boats!—the gun boats!" "Fall in—fall in, men!" "Wheel those guns into battery, why dont you? Come, be lively, there." "Lieutenant R——, is your section ready, sir?" "Then load, sir, load! Load with round shot!" At this moment came a report like thunder—a hissing, whirring noise—a terrific explosion over our heads—and the battery was *under fire*. "One, two, three—there's three of 'em, by —," roared a frightened driver. "Oh, Lordy! yar come another shell—and another! I'm be dog-goned ef they aint all firin' at us!"

Our caisson was now in the rear of a small log house, while our gun was just in front, trying to return the fire of the three large gun boats which were plainly in sight, and the way they slashed them big nine and eleven inch shot and shell over and among our "lay out" was a caution.

"There comes another 'New York lamp-post,' begorra," roared an Irish soldier on our caisson. Just then it (a round of grape) struck the log shanty, while *thud* came a round shot, knocking the whole corner out of the shanty. "Holy mother iv Moses, do ye mind that, boys! By jaburs, they mane it! Savur iv the wourld, but they're in airnist!" as a shell scattered the logs around his ears.

"What's the matter with that gun, sir? yelled Lieutenant R—— to his gunner. "I—I don't know, sir, only 'twont go off"—and he gave another pull on his lanyard. "Change the fuse, then!" "I've done so twice already, sir." (He had only fired two shots.) "Then prime it and fire!" The poor fellow fiddled away at it. He was evidently frightened, when another shell burst over their heads, wounding three of them. They could not stand it much longer. The Lieutenant tried the gun, and it would not go off. "Draw the charge!" he ordered; but, nary draw. He tried it himself. "Why, damn me, you have the shot in first; you fellows have ruined the gun."

The gun boats were now opposite the camp, and had the range of it, and the "Rebs" were nowhere. In five minutes more the *cannon boys* were going it through the woods, while every moment a shell tearing through the trees accelerated their speed. The guns were left where they stood, (five of them,) one being saved by Lieut. R——. Three of the five had charges rammed wrong end foremost into them, while the caissons and ammunition wagons were tearing along the road to *anywhere*, so as to get away from them awful gun boats—the brave boys scattering their contents along the road to lighten them. The boats landed some sailors and soldiers who burned the artillery camp, but were met by a part of the Confederate infantry, just arrived, and had to fall back to their boats, losing some men in killed and prisoners. I, Mr. Fred, happened to belong on the caisson of the gun saved, and just as the rebel infantry arrived the fire of the boats was very heavy, so as to cover the men they had landed—at this moment, when I thought we were all safe out of it—another shell burst right over us. One of our horses fell dead, and I felt a shock as if I was being ripped up—I was knocked into the mud of the road. A piece of the shell had struck me and cut me badly, and burst my *front corner button out*. You can see where the cut was sewed up.

[TO BE CONTINUED.]

☞ Don't fail to read English & Mersick's advertisement.

For the Coach-Makers' International Journal.

VICTIM OF MISPLACED CONFIDENCE.

Mr. Editor:—I, too, am doomed to disappointment, and think friend "Mummy" needs to sympathise with me; for, besides the failures in the monthly collection of dog-carts, Egyptian and Assyrian carts and processions, I am doomed to another disappointment, and wish you to lay my troubles before your readers, that they need not be similarly victimized, or, at least, that they may give the subject more careful thought before proceeding than I did.

Mr. Editor, I do not take your journal, but boss does, and I read it as carefully as if I paid the three dollars and had it come in my name and consider it a very valuable book. In the February number there is an article on wheel making, purporting to be written by a graduate from a log school house in Western New York. I fully agree with him and Spokeshave, Editor, in every point except one. I like my meat, potatoes, and most all kinds of vegetables boiled, but do not want any more boiled hubs. Spokeshave says that it saves labor in driving, which I think is a good reason why they should not be boiler or steamed. If the spokes drive easier, it must be because the wood in the mortise gives way and lets the spoke in with less pressure on the tenon. To hope that it will come back as the water dries out and press up against the tenon, is to hope against reason. On the contrary, the moisture is imparted to the spoke, and all becomes damp alike in a short time. When the water dries out the tenon will shrink a little, on account of being dampened, and the hub will shrink down from the shoulder of the spoke, so that it hits but lightly, if at all, and the spoke, instead of being literally cemented into the hub, (as Spokeshave says,) is held but very loosely. The next trouble is, glue will not stick to a damp hub. If Spokeshave or Graduate can take two pieces of wood and boil one or both of them five minutes and then put them together with glue, so as to make a strong glue-joint, glue and wood will do for them what it will not for me. Glue does not stick to wood on the same principle that a blood-sucker does, by simply coming in contact with it, but it is necessary that it should get in and get hold of the fibres of the wood, which it cannot do when the place is already occupied with water.

Now, Mr. Editor, my experience is as follows, and fully corroborates the above statements. In a day or two after receiving the February number, I drove one set of light wheels, ($\frac{7}{8}$ spokes, $3\frac{1}{2}$ hubs,) best Jersey timber—boiling the hubs according to directions; also two sets 1 inch spokes, $3\frac{3}{4}$ hubs; two sets $1\frac{1}{8}$ spokes, $4\frac{1}{2}$ hubs; and three sets $1\frac{3}{8}$ spokes, $5\frac{1}{4}$ hubs, all cooked precisely according to recipe. They were all rimmed soon after being drove, except the lightest set. They were left standing about six weeks, when I found, on examination, that I could easily draw every spoke with my hands, which I did, and fitted another set of hubs to them, and drove them without boiling. I then examined the others, and found that the mischief was less as the hubs and spokes increased in size, but it was clearly perceptible in them all. I have worked with spokeshave and mallet for about eighteen years, and have never before drove a wheel that I could take the spokes out with my hands, when the wheels were new, and can now produce wheels that have been in constant use ten years, and have been new felloed and tired, that would require considerable skill to remove them without breaking. Finally, keep your spokes and hubs dry as possible.

Victim.

* * *

☞ All kinds of carriage wood-work can be obtained from New Haven Folding Chair Company. See advertisement.

For the Coach-Makers' International Journal.

COLOR.

BY J. H. T.

Continued from page 88.

Of the Colors of Thin Plates. As rays of different colors are separated by the refraction of prisms, and other thick bodies, so are they separated, though in a different manner, in the thin lamellæ or plates of any pellucid matter; for instance, the bubbles raised in water by soap, &c.

For all lamellæ, under a determinate thickness, transmitted rays of all colors, without reflecting any at all; but, as they increase in thickness in arithmetical proportion, they begin to reflect first blue rays, then in order green, yellow, red, more and more mixed and diluted, till at length, arriving at a certain thickness, they reflect rays of all colors, perfectly intermixed, which form a white.

But in whatsoever part a slender lamella reflects any one color, for example blue, in that part it always transmits the opposite colors, for instance, red or yellow.

It is found by experience that the difference of color of a plate does not depend upon the medium that encompasses it, but the degree of vividness does; cæteris paribus, the color will be more vivid, if the denser medium be encompassed with a rarer.

A plate, cæteris paribus, reflects more light as it is thinner, as far as a certain degree of thinness, beyond which it reflects no light at all.

In plates, the thickness of which increases in progression of the natural numbers, 1, 2, 3, 4, 5, &c., if the first or thinnest reflects any homogeneal ray, the second will transmit it; and thus is the same ray alternately reflected and transmitted, *i. e.*, the plates corresponding to the odd numbers, 1, 3, 5, 7, &c., will reflect the same rays that those corresponding to the even ones, 2, 4, 6, 8, &c., transmit.

Hence an homogenous color in a plate is said to be of the first order if the plate reflects all the rays of that color. In a plate whose thinness is in a three-fold proportion to the first, is said to be of the second order; in another whose thinness is said to be five times that of the first, it is of the third order, &c.

In some plates the color will vary as the position of the eye varies, in others it is permanent.

Colors of Natural Bodies.—Bodies only appear of different colors as their surfaces are disposed to reflect rays of this or that color alone, or of this or that color more abundantly than any other; hence, bodies appear of that color which arises from the mixture of the reflected rays.

All natural bodies consist of very thin transparent lamellæ, which, if they be so disposed in regard to each other, as that there happen no reflections or refractions in their interstices, those bodies become pellucid or transparent; but if their intervals be so large, and those are filled with such matter, or so empty, in respect to the density of the parts themselves, as that there happen a number of reflections and refractions within the body, the body in that case becomes opaque.

The rays which are not reflected from an opaque body, penetrate into it, and these suffering innumerable reflections and refractions, at length unite themselves to the particles of the body itself.

Hence an opaque body grows hot the sooner, as it reflects light less copiously; whence we understand the reason why a white body, which reflects almost all the rays that strike upon it, heats much more slowly than a black one, which reflects scarce any.

In order to determine that constitution of the surface of bodies, wherein their color depends, it must be observed the smallest corpuscles, or first particles of which surfaces are made up, are most thin and transparent, and separated by a medium of a different density from the particles themselves. So that, in the surface of every colored body, are innumerable smaller thin plates, corresponding to those of bubbles; wherefore, what has been observed of those may be observed of these.

Hence it is gathered, that the color of a body depends upon the density and thickness of the parts of the body between the pores of the surface; that the color is more vivid and homogeneous as the parts are thinner; that the said parts are thickest when the body is red, and the thinnest when violet; that the parts of bodies are usually much denser than the medium contained in their interstices; but that, in the tails of peacocks, some silks, and generally in all bodies whose color varies according to the situation of the eye, it is less; and that the color of a body is the less vivid to the eye, as it has a denser medium within its pores.

Now, of the several opaque bodies, those consisting of the thinnest lamellæ most of which are black. Those again consisting of lamellæ, most of which are of some intermediate thickness, are blue, green, yellow or red, inasmuch as they reflect the rays of that particular color much more copiously than that of any other color; most of which last they either absorb or extinguish, by intercepting them, or else they transmit light.

Hence it is that some liquors, for instance, an infusion of lignum nephriticum, appear red or yellow if viewed by reflected light, and blue by transmitted light, and lenses of gold, yellow, if viewed by reflected light, but green or blue in the latter.

To this we may add that some of those powders used by painters have their colors changed by being finely ground, which must be caused by the comminution or breaking of their small parts into others still smaller, just as a lamella has its color altered by altering its thickness.

In short, those odd phenomena arising from the mixture of different colors, can no way be accounted for than from the various actions of the saline, &c., corpuscles of one liquor with the colored corpuscles of another; if they unite, the mass will either swell or shrink, and thereby its density will be altered; if they ferment, the size of the particles may be diminished, and thereby the colored liquor may become transparent; if they coagulate, an opaque liquor may be produced of two transparent ones.

Hence it is easy to conceive why a colored liquor in a glass of a conical figure, placed between the eye and the light, appears of a different color in different parts of the vessel; there being more and more rays intercepted, as they pass through a longer or shorter section of the vessel, till at the base they are all intercepted, and none seen but those that are reflected.

From the various colors of natural bodies, (Sir Isaac Newton observes,) the bigness of their component parts may be estimated, for that the parts of bodies do properly exhibit the same color with a lamella of equal thickness, provided the density in both is the same.

The seven painting colors in general.—

1st. The chief whites are spodium, cerufs, white lead, Spanish white and egg shells burnt.

The Spanish white is thus made: Take some fine chalk, about 6 ounces, alum 2 ounces; grind them together in fair water till it be like pap; roll it up into balls, which dry leisurely; then put them into the fire till they are red hot; take them out and let them cool. This is the best white to garnish with for water coloring, being ground with weak gum water.

2d. The chief blacks are ivory burnt, lamp-black, sea coal, verditer burnt, and mummy burnt.

3d. The chief reds are carmine, vermilion, red lead, Indian lake, cinnabar, red ochre, yellow ochre burnt, and Indian red.

4th. The chief greens are green bice, green pink, verdigris, verditer, sap green, and pink mixed with bice.

5th. The chief yellows are, orpiment, masticote, deep and light, saffron, pink-yellow, dark and light, ochre de luce, English ochre, Roman ochre, and gall-stone.

6th. The chief blues are ultramarine, indigo smalt, and blue bice.

7th. The chief browns are umber, Spanish brown, Cologne earth, gall-stone, rust of iron, and mummy.

This is to be noticed, that, of the colors before named, vermilion, verdigris, orpiment, and some others, are too coarse and gritty to be used in water colors, unless they are purified and prepared. And turn sole, litmus blue, roset, Brazil logwood and saffron are more fit for washing prints than curious limning.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 2.

BY J. H. T.

STAINING WOOD.

To stain wood red.—Take half a pound of fernambouc, rain water, a handful of quick lime, and two handsfull of ashes; let them steep for half an hour in the water, and settle to the bottom; then take a new earthen pot and put in the fernambouc, with the ley made of lime and ashes; and having steeped it half an hour, boil it. Then let it cool a little, and pour it into another new pot, adding to it half an ounce of gum arabic; then put some rain water with a piece of alum into another pot or pan; boil it, soak the wood in this alumed water, then take it out and dry it; then warm your red color, and with a brush rub it as long as you think necessary; then dry it, and polish with a dog's tooth or piece of ivory, and it will be of a scarlet shining color.

To stain wood of a yellow color.—This may be done either with French berries or alum, or with tumeric or saffron, or with merita earth.

A polished black for wood.—Cover the wood with lamp black ground in gum arabic water, with a pencil, and when it is dry polish with a tooth, and it will look very well. Another way is, to put little pieces of very rusty iron into good black ink, and let it stand about two weeks; after which rub the wood with it, and it will penetrate it; then polish it, and it will look beautiful.

An excellent blue color for wood.—Boil a quarter of a pound of turnsole for an hour in three pints of lime water, and color the wood with it.

A violet color for wood.—Temper Dutch turnsole with water, and strain it through a cloth; before it is used on your work, try it on a piece of wood to see if it is not too deep. When you have laid on the color, put some of the same color to a quantity of water, to render it very thin, and wash the wood with this till it becomes bright; then dry it, burnish, and varnish it.

Another violet.—Boil four ounces of Brazil and eight ounces of logwood together, in two quarts of water, with an ounce of common alum; steep the wood in this.

A purple color for wood.—Steep turnsole as is directed for violet color, and add to it the tincture of Brazil boiled in lime water; it makes an excellent purple; this ought to be varnished, both to beautify and preserve it.

To make wood a silver color.—Reduce tin glass in a mortar to fine powder: add to it water, and grind it to the fineness of paint; put it into an earthen pan, and wash it two or three times till it is very clean; then mix clear glue with it, and having first warmed the wood, lay the mixture on it with a brush; let it dry, and polish with a tooth or piece of ivory.

Be it remembered, that your wood must be close-grained, and if it is hard, so much the better.

CHRONICLES.

BY GENIUS, THE SCRIBE.

CHAPTER III.—ENTERPRISE OF EZRA.

Now, Ezra having more "*brass*" than he knew what to do with,

Did take a "*sharp stick*" (a crowbar) and therewith did open a "hardware" store. And the same was kept in the "western" corridor, nigh unto the *mineral* room And he did deal in *brass*, *old nails*, *spikes*, and divers other things.

Now, at the same time, in another portion of his temple (?) he did open a museum

The collection was *grand*, and did consist of a "*What is it*," in getting which, Ezra was slightly sold.

Then there was "Sharp-Stick," formerly king of the Cannibal Isles

There were, also, "harfangs" and "cormorants" and other things, the like of which ye have never seen.

And specimens of ancient architecture, from all the lands that lieth toward the rising sun.

Among them was the "Hearse of Alexander," called, in the dialect of the Persians, Harmamaxa.

Then he did have the "Roman Hackney Coach," and many other interesting (?) things.

There was also a small portion of Dabb's, the Younger's, Poetry, (?) to which was attached a fragment of Gotham Rhyme. But the rarest of *all*, was *one* man who did *not* take the book of Isaac.

Now, what with his book, museum, and his divers other dealings, Ezra was so overburthened that he did get a buzzin' in his head.

And he did wax very, *very* wroth.

And he did pursue Isaac with a *sharp stick*, but Isaac did keep him at bay with *a cros-tic*.

And he did open his loving arms to receive all penitent sinners, who had been "conceived in iniquity and brought forth in sin."

So, Ezra did expect that all those whom, in former days, he had spoken all manner of evil against, would fly to his outstretched arms.

So he did say unto them—come unto me, put your trust in me, and I will avenge ye.

But Ezra never got an armful of repentant sinners.

So, Ezra marveled again, and, unlike Job, he did impatiently wait to hear from the multitude (?) of wronged (?) men.

Now, it being Easter, when all the natives of the land do eat the *eggs* of fowls,

Ezra did *eggs*-pect to hear from many, and he did think it was *eggs*-traordinary when he got but one.

And this one did *eggs*-aggerate the things of which he spoke; and Ezra not being able to *eggs*-hort any more people, he was satisfied.

And Ezra's so-called scribe, was one of those who could "sling ink," and he did charge *somebody* with writing this history.

But his charge was false.

And he did call him a "*bilious, cross-grained, dyspeptic, thin, cavernous individual.*"

So has he sworn eternal enmity to Isaac, and his "*now* worthless (?) book."

His battle cry (not from the Songs of Solomon) it does not befit me, as a scribe, to tell ye—as it was profane.

So, Isaac was warned to be-*ware*, and he was terrified (?) beyond measure, insomuch that he did tremble (?) in his *sandals*.

Now, Ezra's *far-seeing*, but *short-sighted* scribe, did charge *somebody* with formerly writing trash for the book of Isaac.

And *he* spoke the truth, for Isaac did do wrong in receiving the epistles of a man,

Who, under several "captions," did write those things at which all COACHMAKERS did RAIL.

But Isaac did take them, and did KEEP them; therefore was he guilty.

Now, Ezra and his so-called scribe were covered with "*boils, plague-sores* and *embossed carbuncles*,"

Insomuch that the people did notice them, and did say—

"Upon whose meats have these our *siezers* fed. that they have grown so *fat?*"

And Ezra (or his scribe) did speak of things unknown to them, such as *nobleness, liberality, sense*, (?) *justice*, (?) *generosity* and *fellowship*.

Now, Ezra did *blow* himself up to an alarming size, *like unto a turkey gobler*.

And anger, disappointment and envy did fill Ezra's bosom—that bosom on which reposed *those* repentant sinners.

Ezra wept.

And seeing that all his well-laid schemes for the overthrow of Isaac had fallen to the ground,

And finding he could not deceive the men who took the book of Isaac,

Therefore turned he his attention to those who do deal in those things which a chariot-maker doth need.

But he did fail in *that*, for the book of Isaac doth speak for itself.

Therefore did great fear sieze upon Ezra, lest a few more *fiery* (?) articles like that in his April book, might *explode the magazine*.

Pencil, Rule & Square.

D. BOARD, EDITOR.

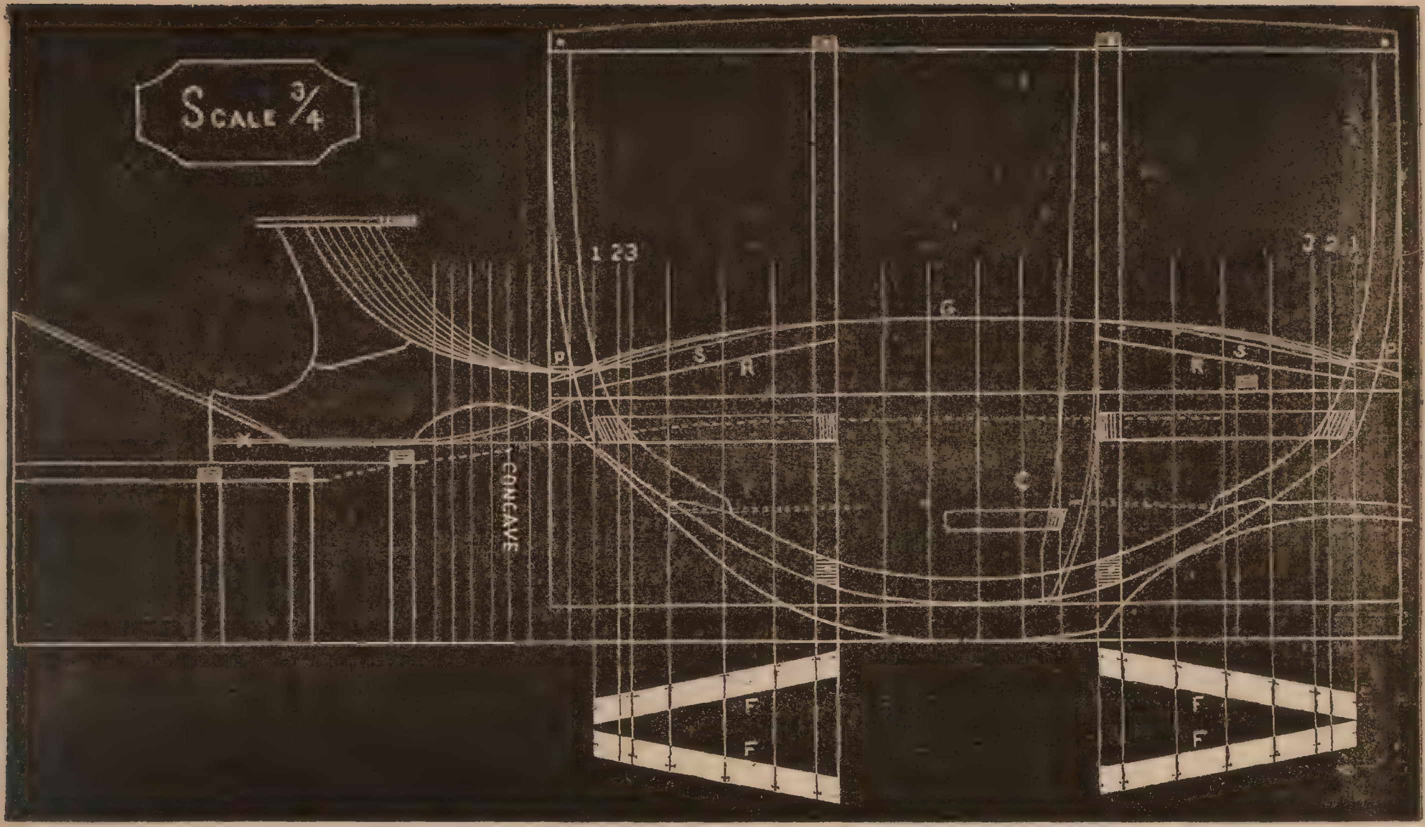
FRENCH OR SQUARE RULE.

PART THIRD.

BY A PRACTICAL CARRIAGE ARCHITECT.

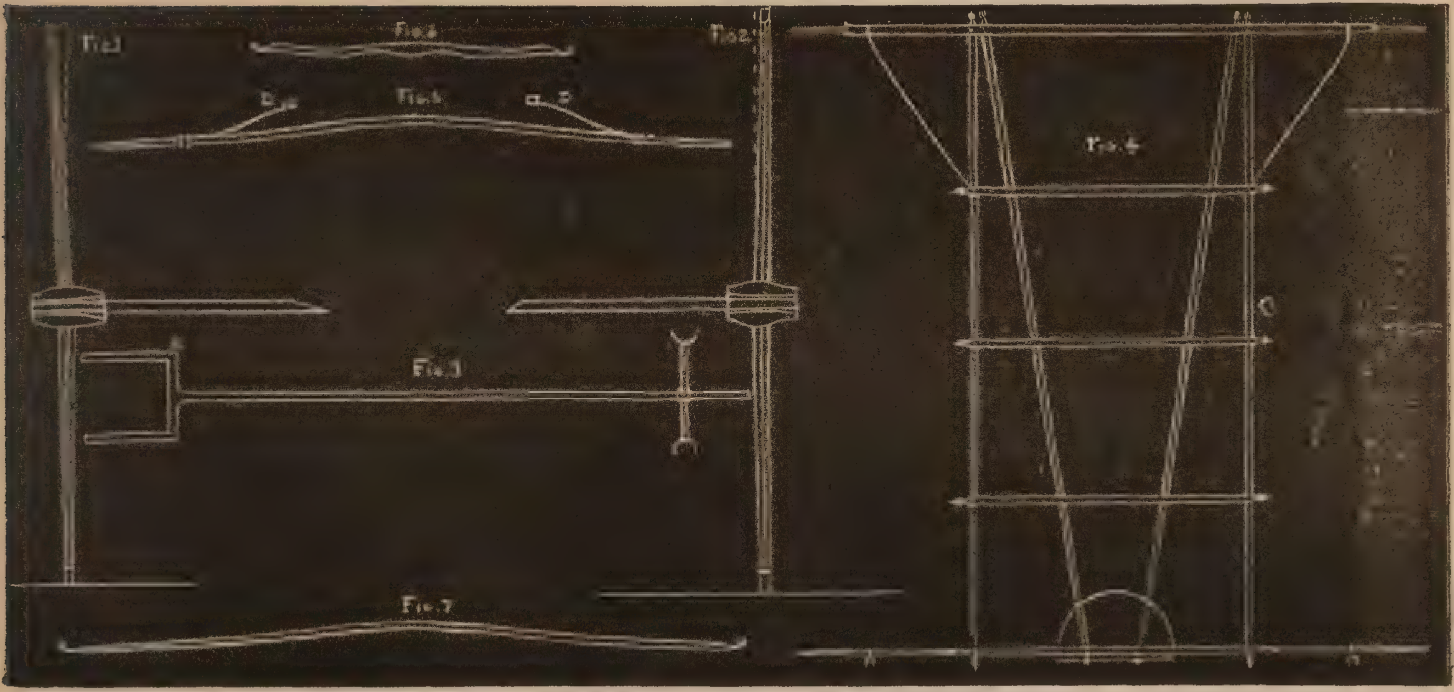
In this diagram we have given all lines necessary for the completion of the body, which have already been explained, excepting the sweep necessary for pricking off the lower edge of the belt-rail; the object of this line is, when the rail is swept off for guaging from the outside and when let in will lay level on the outer surface. We now explain how this line, with the other three, are established. G the roof-rail, and S S the cheat lines for pricking off the bottom sides before explained, the next line, for the top edge of the belt-rail, that was introduced in the February number as a dotted line. This line is drawn by using the roof-rail pattern, commencing it on perpendicular line No, 1, where it intersects with the cheat line S at the extreme front and back ends of the belt-rail, and swelled up to line G, carrying an easy sweep across the door.

The next is the establishment of the line for pricking off the lower edge of the belt-rail. With your dividers, place one point on parallel line P, where it intersects with perpendicular line 3, the other point on the cheat line S. This space is obtained by the horizontal line P, the distance from the top to the lower edge of the belt-rail, as let in to the front and back pillars; add to this



Coach Drafting: The French, or Square Rule.

Three-quarter inch Scale. Explanation on Pages 122.

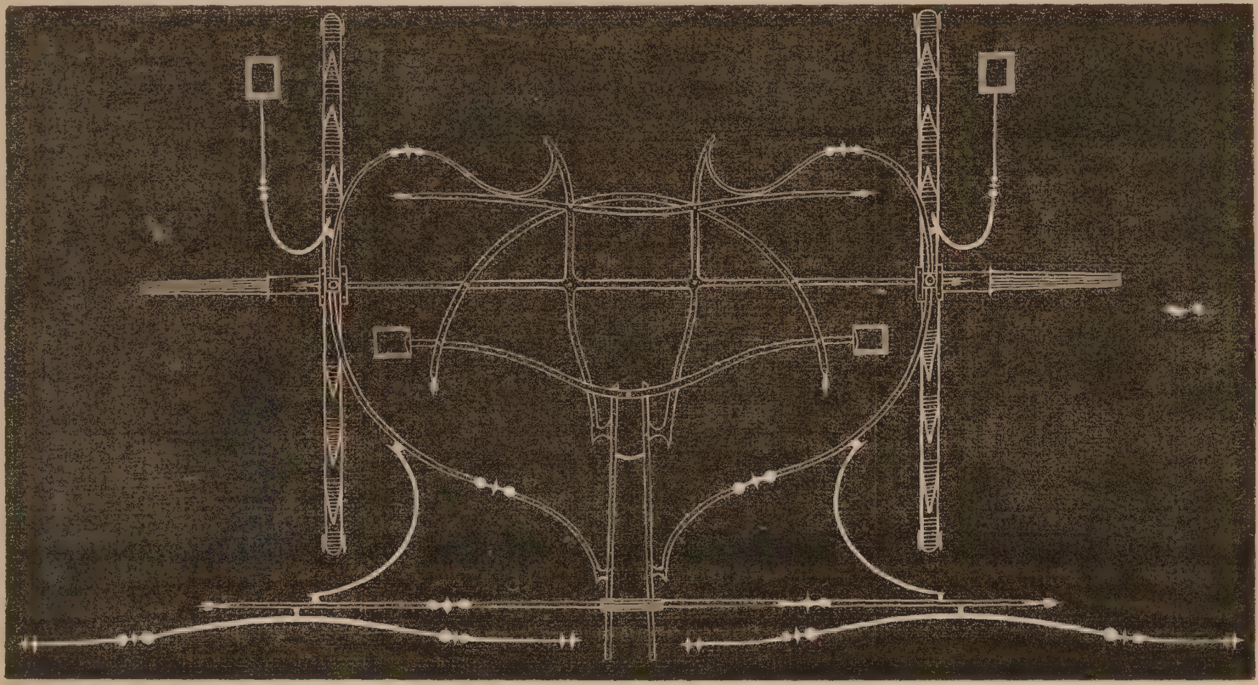


Axle Setting and Perch Carriage.

Explanation on Page 125.

space already taken, the difference in the turn-under from the top to the lower edge of the belt, at the standing pillar. Proceed and prick it off from the cheat lines S, on perpendicular line No. 1, from this prick sweep into line G. Next proceed and lay the belt-rail in the proper place and transfer the perpendicular lines, setting your bevel from line R, being the face of the belt on the cant, on to any of the perpendicular lines. This you can bevel across top and bottom, also for your shoulders, as represented by the white space below the draft, showing the same position as on the cant, F being their faces.

Now proceed and prick off the top of belt, commencing with perpendicular line No. 1, deducting the turn-under from the line explained as the top of the belt, from this point to line R, being the face of the belt on the cant. This you can prick off, and so on the full length of the belt, as illustrated and described in the manner of pricking off the bottom sides and corner pillars. Having the top, turn over and prick the bottom; now they can be swept off, which gives you both the sweep and the bevel.



FRONT GEARING OF KILLAM LANDAULETTE. Plate No. 30. Explanation on page 118.

You will next prick off the neck piece for the concave, by laying it on the draft, in its proper place; transfer the perpendicular lines; after being squared across, can be pricked off, X line being the face. In dressing the standing pillars, mark off and dress the door pillars at the same time; leave three-sixteenths of an inch spring in the lock pillar at the lock. Having all your stuff dressed, commence to lay out the whole body, including the doors, guaging from the outside; and when ready to frame, you will do it all at once, also in lightening out, with the same system, this being the quickest and most correct manner of constructing a body. Back and front paneled, canvassed, lined up, and cleaned off, ready to be set up; also panel your doors while the rocker plates are being made. This closes the application of the French rule to this coach, being the plainest kind of a job.

In giving these explanations and drawings, we have endeavored to give it in a simple, clear manner, and we think our readers will bear us out in the assertion that it has never been given before where it can be so easily understood. In order to avoid *confusing* the young beginner, we did not deem it advisable to leave off *figures* and *letters*, but have extended our explanations through eight numbers, giving about three engravings in explaining the same points that have heretofore been massed in one or left off altogether. If, however, there are any points that we have not fully demonstrated, we will consider it a special favor for any one to notify us, and we will take great pleasure in explaining: and as we said in the commencement, if there are any that differ with us in our manner of explaining, we cordially invite them to state their objections through the columns of the Journal, and we will give them our respectful attention.

Hereafter, we shall continue to apply the Rule to the most difficult as well as the plainest jobs now built.

We shall, with the next number, as intimated in a former article, commence a series of lessons on Scale Drafting. We feel satisfied there is no one thing we could insert that would be more acceptable to the body-maker, and following the French Rule will be received and appreciated by all interested in this department. In our opinion there is nothing more important to the progressive workman than a clearly-explained system of Scale Drafting, for no body-maker or apprentice should consider himself master of his branch until he has become an adept in this important part of his trade. How much better for the apprentice to spend his spare evenings with the Journal, his dividers, triangles, curves, &c., before him, practicing his eye on true sweeps, and preparing himself to be able to take a first-class situation, than to be wasting his time in foolish amusement, and, in many instances, worse than wasted. Look to our leading workmen, and we find most of them have, by diligence and close application to their business, attained their superior knowledge and skill, and can command almost any wages, and steady employment.

Although attended with considerable expense, we purpose giving engravings of the different instruments and tools required, and shall give full explanations from a pencil sketch to India ink, and then to a fine French colored draft, with description of the materials used.

We have, during the past year, labored hard to make the Journal instructive and useful, and our efforts have been appreciated. We make no promises further than to say, it shall be our object to not only retain its present popularity, but make it far superior to any previous numbers, believing it to be more to the interest of our readers to give *practical* and *useful* illustrations than spending our means on *Egyptian* or *Assyrian processions*, with a view to using them hereafter in some antiquated history.

REFRESHING.

In the January number of the Journal, on page 56, under the heading "Something New, Useful and Practicable," we said:

> "The Buggy being crowded out of the last number to give place for sleigh designs we were obliged to lay this over also."

This notice refers to the manner of constructing the Kimball Buggy, given in the January number, plate No. 16, with accompanying drawings, showing half end view, side elevation, bent panel, top view of panel and bottom side, explained on page 56.

Three months had passed away, and the contents of the January number were almost lost sight of when our attention was again directed to it by a polite insinuation by "Body-Maker," in the April number of another magazine, who says that it looks as though we had taken the idea from what *he* "incidentally mentioned."

This is cool and refreshing, and shows to what straits men are sometimes driven. We suppose it was "another original (?) emanating from this office;" or, "another evidence of the original genius of our artist."

But as it was published three months after it appeared in the JOURNAL, we leave our readers to judge of its originality. *But, it did appear,* and was applied to the outlines of a badly proportioned imitation of the "Improved Goddard," (minus the cleft in side,) published in No. 5 of the JOURNAL, plate No. 20. So it goes.

It looks very much as if he would like the readers of that monthly tortoise to believe that *he* was the originator, or, to say the least of it, that there could be no original ideas, or comparatively *new* application of an old idea, west of the Hudson. He would like his readers to believe that he had not copied our plan, but it is only a feeble attempt to throw dust in their eyes; if not, why did he allow three months to elapse before he gave it? He says: "We made them, more or less, eighteen months ago." We don't doubt that, for *we* applied the bent-panels across the grain for different purposes, and also on bodies, ten years ago.

Its application to a buggy body, as given in No. 4 of the JOURNAL, has no doubt been thought of by every carriage-maker in the country. The patent bent-seat panel, which came out about three years or more ago, would have shown it to be feasible, even if the necessities of the builder had not suggested it earlier.

Still, we claim it as "new," in that it had not been given to the public prior to its publication in the JOURNAL.

We are reminded by the remarks of "Body-Maker" of a criticism he was pleased to make last July, in the manner of making round corners. In that article the writer took exceptions, stating that "the corner block should be halved to the bottom-side, and the block to be lightened out on the inside"—*he did not mention the end bar.*

In answer, I said: It was preferable where the corner block is lapped to the bottom-side to form a double lap on the bottom-side and end bar, bringing it to 3-16ths of an inch at the edges of the lap, and ⅝ at the corner; or cut the corner off on an angle, and the corner block in like manner.

In the December number, the writer brings forward the same manner of construction and says: "I did not then pretend to give the mode of construction but only the principle."

If he did not give it at that time I don't know what he means by saying, "the corner block should be lapped to the bottom side, and inside lightened out."

We took him at what he said, not being able to divine what he should have meant. After our objections to *his* mode, which we made known in the August number of the JOURNAL, he evidently changed his base, and adopted *our* plan of double laps, &c., stating that the "objections made by said writer are no objections at all," or, in other words, we were *right* and he was *wrong*.

Again: In closing an article, in the same number of the JOURNAL, explaining the diagram of a Clarence "cant," we said:

> "Great care should be taken in laying out this class of work in producing the side elevation as well as *cant*, as one of the surest signs of a good mechanic is his exactness. If he has the faculty of producing the side elevation and *cant* correctly and turning out work finished to a hair, or can fit a joint or bearing to a nicety, then he may be set down as a finished workman."
> And further: "That I am prompted to these remarks by noticing the *so-called cant* of a coupe body given in the monopoly. Such a *cant* would certainly lead the body-maker into trouble if the body was swept to that cant. You would have the back pillar cut off at the top, therefore not having anything for the framing of the top-rail into, or for glueing the top back panel."

To this we have had no response. In regard to copying from the JOURNAL we have no objections, provided due credit is given. But it is not altogether on the square to take the practical illustrations from a publication, regardless of the copyright, and then attempt to claim being the originators.

Wheel-Horse and Mallet.

SPOKE SHAVE, EDITOR.

Having followed our wheels through the hooper's hands, they are again brought to the wheeler for boxing. Much depends upon the same being properly done. Care should be taken not to damage the hub in wedging. Get the centre of hub on the back, and cut out for the box about one-sixteenth less than the back end of box. This may not always hold good, for the reason that some hubs are very hard—we must use our judgment. Our object is to get our box in tight enough to avoid the necessity for wedging on the back. We should leave at least one-sixteenth of an inch, or, in other words, cut out the hub one-eighth inch larger than the body of box to prevent the tar of axle coming in contact with the end of tenon, which is very damaging to the wheel. When ready to insert the box, we should cover every portion of the hub on inside with white lead, also lead the box; this will, in a measure, prevent the oil penetrating the hub; it also prevents the box from leaking, as many have sand holes in them. The lead on the box forces to the back, and that in the hub to the front, closing up every cavity, and preventing oil or grease from entering either back or front.

Having got our wheels boxed, we will call upon Brother V. Ulcan with his, or the seeming principle of setting axles. In using the word seeming, I do so from the fact of its having been the custom heretofore. I requested V. Ulcan, as will appear on page 56, to inform me and my brothers of the hub fraternity, why it is that, as a general rule in setting axles, they give their wheels from 4½ to 5 inch swing, or that much wider across the top than on the track, and what is the correct rule governing the setting of axles?

We find on page 74 that he has taken up the question, but with all due respect I will say I think he has failed to unravel the mystery, or difficulty, attending this particular branch of smithing. Friend Harper has, as appears on page 103, made some *pertinent* and striking allusions to the selfishness of mechanics, but having several questions propounded to us, and for fear of occupying too much space, we must defer any further remarks on the axle question.

N. B. E., THREE RIVERS, MICH.—Your letter came to hand too late for No. 7. Your question is one of the utmost importance to a wheeler, and it shows on your part a desire to know the whys and the wherefores, which is, to my mind, indicative that your aspirations will not be satisfied with anything short of the position of a first-class mechanic; and I assure you that inasmuch as friend Ware has confided to my hands the Wheel Department, nothing gives me more pleasure than to render services to the best of my ability in that department.

And now let us look at your question. You wish to know as to whether the spoke is cut down one-sixteenth of an inch from the outside of the shoulder, or do we take a chamfer off the inside of the mortice one-sixteenth of an inch? I will commence with the mortice. I do not take a chamfer off the inside of mortice, for the reason that when the shoulder of the spoke comes down to the hub, it throws the strain on the outer edge of shoulder, causing the same to check off from the tenon. I let the size of the shoulder square down in the hub. I then take my spoke and strike the edge off with a file, just enough to form a square shoulder, with the face of the hub, when the same is settled down in its proper place. This, instead of checking off, has a tendency to press your shoulders up to your tenon; and when your spokes are once settled in the hub, there is no fear of checking off. If your glue is as thick as it should be, you will see that it has no means of escape from under the shoulder when it is let square down. By this process you can plainly see that the spokes are firmly set in the hub. The result is, we destroy that old eyesore so much complained of by our employers. By striking off this edge on the spoke, there is no necessity for putty or flowing of paint in the cavity around the spoke; in the other case, the shoulder will have the appearance of the spokes being loose in the hub, then we poor wheelers receive our portion from the damaged reputation of our employer.

J. S., OF DUNNVILLE.—Your question, as referred to in No. 7, is one that has given the trade a great deal of annoyance. Nothing is so trying to the builder as to have to contend with the cutting of the worm after he has devoted so much time and labor in preparing his work for the show room. As I said in my last, (I still hold the same opinion,) that it is impossible to prevent this cutting of the worm—it is also impossible for the wheeler to detect the existence of the same. I have always made it a specialty to examine carefully my spokes and felloes; still they would come out from their hiding place, showing that they were invisible, untraceable, and at the same time destructive. I have been told by old wheelers that they could pick out of a lot of green, rough stuff, every piece of timber that the worm would cut. Not knowing all things, I could not say it was or was not so; but the truth of my own opinion is that it is impossible. I have observed this one fact, that, as a general thing, they first commence to cut in the sap. As I said in my last, I believe them to be the creature of sap, and that nothing in the process of steaming or heating will affect them until after they have passed out of the embryo. It is my impression that the whole trouble, consequently the remedy, is in the hands of those who cut our timber. I have been told by those who have experience in matters of this kind, that there was a certain time to cut down the timber that is to be used for such purposes. If you wish to retain the strength and prevent the worm, the time is during the dark nights of August. Not being given to surmising on subjects of such great importance, I shall be pleased to hear from any and all who are in possession of facts bearing on the above subject. If such a one should present himself, he will prove himself to be truly a beneficent being to the trade.

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

MATERIAL.

The quality of wrought iron can hardly be ascertained on its surface. The best way to judge the texture is, to have it cut apart; when cold, brittle iron will break after a few blows, and show a coarse grained, short cut; while a superior quality of iron bends, resists separation, and shows a fibrous cut, having either a light color, with a dull lustre, or a dark color with a bright lustre. Inferior iron will appear either bright and glistening, or dull and grayish at the cutting.

Iron heated bright red will also show breaks or flaws when bent, punched or upset. Steel is considerably harder than iron, but can be filed or drilled. If cooled off in water when red hot, it attains the hardness of glass, and is tempered by heading the polished surface to a bright yellow, and cooled in water, and has then the right temper for cold chisels, hammers, swedges, &c. Steel for springs must have a degree of hardness between that just described and wrought iron. The manner by which articles of wrought iron become a steel-like surface, consists in heating the iron in a fire-proof box, filled with pulverized charcoal and wood ashes, creating carbon, which unites the more readily with the iron the longer it is exposed to the heat. Steel manufactured on this plan appears inferior after this first issue, and is refined by welding and hammering out, and by repeating the same process of heating as before, gives the refined steel. Steel, moltened in an air-tight vessel, consolidating breaks or unsound spots, and being thoroughly saturated with carbon, makes the cast steel.

AXLE SETTING.

(See illustration in front of Journal.)

As there has quite a little controversy sprung up in regard to an article in the February number referring to "Setting of Axles," we will here state that some of our leading men in carriage building work after the plan set forth. In a country like France, having a like track, and wide bodies, it is necessary to obtain sufficient room for a body between the wheels, and the difference between the width of wheels at the bottom and top is even more than 5 inches in some cases. Our wheels for coaches have in general ¾-inch dish. Take a heavy coach wheel, 3 feet 10 inches in diameter, full ¾-inch dish, will give almost 4 inches difference in the width between top and bottom; the hub, 7¼ inches by 5¼ inches diameter; spokes morticed ½ of an inch nearer to the front, and the axle-arm ¾ of an inch tapering down. A four-feet buggy wheel has no dish, but the hooper contrives to dish it ⅜ of an inch; set of axle, 7-16ths; hubs, 6 by 3¾ inches. This will give you 2½ inches difference in the width at the top, *Figs.* 1 *and* 2.

You go around the majority of blacksmith shops, and you will find no axle-setter except for a ⅜ taper, but the men contrive to get along. Did they have a joint like *Fig.* 3, they could regulate any fraction of a set by moving the prong down, if more than those established ⅜ of an inch. The opposite prong is square, and regulates the gather, which is 3-16ths inch.

Fig. 4.—*Top view of side spring gear.*—It is a double perch gear, drawn on the ¾-inch scale; the side springs, *Fig.* 7, rests upon two short springs, *bb*, *Fig.* 5, on the hind axle, and in front on the head block, *Fig.* 6.

☞ If you want a brush just suited for Piotrowski's Permanent Wood Filling, send to C. D. Thum, No. 150 North Third Street. See advertisement.

☞ If you wish to make any Jump-Seats, read Kimball's advertisement first.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

THE ART OF COACH PAINTING.

(Continued from page 110.)

The larger size for bodies, the lesser for gearings. The binding, or banding, on a paint or varnish brush is an important item.

Brushes are bound with cord, wire, metal stamped in imitation of wire, tin and copper. The *oval* and *round* paint and varnish brushes are bound with cord, wire, imitation of wire, and copper. The *flat* bristle, fitch, badger, Thum's half-elastic, bear-hair, and camel-hair, with *tin*.

Wire and copper binding are the most durable. The cord-bound brush may be rendered more serviceable by giving the binding and the back part, where the handle is inserted, a coat of oil lead. This coating will protect the cord from rotting. Paint brushes should be suspended by the handles in water, covering the bristles and no more.

VARNISH BRUSHES.

Painters differ widely in their estimates as to the best varnish brush for coach body work. We occasionally find those who prefer the old-fashioned bristle, and claim for it all the good qualities to be found in any other make. We will not quarrel with them, as we have seen first-class work done by the use of the brush named. We think, however, that less skill is required in laying on a level coat of varnish with the flat brushes.

The black sable and badger (both flat) have found favor with a great many painters within a few years, especially on light work. One serious objection to them is, when applying rubbing varnish, the hair is too soft to spread on the varnish without thinning it down more or less with turpentine. Still, they are not to be cast aside as worthless, for they are capable of producing beautifully finished work.

Thum's half-elastic (flat) is now the favorite brush for finishing coats, and may be used for the rubbing coats also. It combines in one brush the strength required to spread the varnish, the point is as soft and fine as the fitch or badger, and, therefore, will not leave marks after it.

After having used the black sable, or fitch-hair varnish brush, the painter will be apt to think the Thum brushes rather clumsy, and object to them on that account. After using them for a month or two, and then attempting to varnish with the flat fitch or badger, he will wonder how he had finished work with so weak a brush.

Having mentioned the different kinds in use, it remains with the workman to select those best adapted to his wants.

PAINT BRUSHES.

For carriage work the medium sizes should be used. For lead and rough coatings on bodies a larger brush is required than for carriage parts. Body brushes should be kept separate from those for carriage parts, and not used, as is too often the case, at one time on a body, at another on the gearing. Gearings wear a brush out hollow in the middle of the point, which unfits them for laying on a level coat on a body.

We think it cheaper in the end to buy oval or round varnish brushes for lead and filling coats, as they wear longer, and do the work better from the start. When they are worn sufficiently to be fit for color they will render good service until the bristles are worn down too short for any purpose.

A new paint brush should be "bridled." This is done by covering it with a piece of leather, extending from the heel to about midway of the bristles, and stitched together, drawing the leather tight enough to keep the bristles straight. By this means a new brush may be put into immediate use on rough coatings. When the end is worn down, cut away the leather, and the brush will preserve its shape.

DUSTERS.

Of these there are also two or three qualities. The cheaper kinds will answer every purpose for the lead and rough coatings. The black are best for color and varnish. The varnish or color duster should not be used on lead, nor the lead duster on color or varnish coats. In the varnish room, more particularly, is it absolutely necessary to keep a clean duster. Flat and round dusters are each useful to the finisher; the flat one is best suited to narrow places, and will avoid bruises which may happen in the attempt to dust out with the round brush.

The duster used for finishing should be washed out occasionally with soap and water; and from day to day, as work may require finishing, it should be rinsed out in clean water, and dried before dusting off.

MOTTLERS OR BLENDERS.

These are flat camel-hair brushes, bound in tin, which are now used by all coach painters in coloring bodies, and not unfrequently on carriage parts. Those with short handles we have found the best. Sizes ranging from ½ inch to 3 inches, are as large as the coach painter requires. The 1 in., 2 in. and 2½ in., are full large for buggy, barouche and rockaway bodies; but for heavy coaches, with close quarters, the 3 in. should be added to the set. The ½ in. blender is useful in touching up on bodies where a narrow place is to be colored, as it lays the color on thin and level, avoiding laps and ridges; also, in blacking off irons, &c., on the carriage parts.

Color, properly applied with a blender, will be free of brush marks, and the surface gained by rubbing out the body, improved. They are worthless as varnish brushes.

PENCILS.

The small brushes used for striping, ornamenting, lettering, &c., are called *pencils*. The stripers are made of sable, camel and cow hair. Sable hair is of two colors, viz: red and black, either of which is superior to any hair now being used. The red sable hair is somewhat the finest, and is probably the best for ornamenting pencils. For large, broad stripers we think the black ones are superior.

For fine lining either kind may be used, but *we* prefer the black.

Camel-hair pencils work very pleasantly for broad lines, and are preferred by some first-class stripers. The hair being weaker than the sable, they should be shorter.

Those made from cow-hair are worthless.

ORNAMENTING PENCILS.

These may be had in quill, *without* handles, or tin-bound, *with* handles. Those without handles are in goose, duck, crow and swan-quills. The sizes are various—suited to the most delicate touching, or the larger ornamental work. The best are those with handles, tin-bound. The ornamenter will need both flat and round pencils—round pencils for laying color on heavy, the flat ones for thin and crispy touches.

They should be kept perfectly clean, greased, and laid away in a box, so arranged that the points will not become bent. When the smallest quantity of paint dries in the hair, the pencil will not work well.

LETTERING PENCILS.

Sable and camel-hair are both used; they should be from ½ in. to 1 in. or more long. Buy them in quills, making handles to suit them. The shorter ones for filling in, after the outlines are traced.

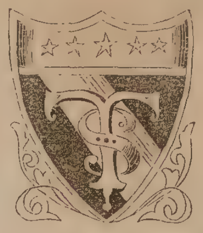
PAINT POTS.

Pint and quart cups are the most convenient sizes for general use.

The shop should be well supplied—but it is seldom the case—and painters resort to empty oyster cans, fruit cans, mustard boxes, &c. The coarser paints may be kept in empty white lead kegs, cut down and supplied with rope or wire handles. Cups for fine colors should be kept clean on the edges. When they are set away, cover them up with paper, which will keep out dirt, prevent the paint, in a measure, from skinning over, and last, but not least, be a notice to *meddlers* that the cup and color *are in use*, and are to be *let alone*.

Quart cups are best for varnishing on carriage parts. Pint cups are as large as is necessary for body work. All varnish cups should be kept perfectly clean. To do this, it will be necessary, after using, to rinse them out with turpentine, and with a stiff-bristle tool work up the varnish that collects on the side of the cups, and with a piece of hair, soap and water, cleanse them thoroughly, rinse them in clean water, wipe dry with chamois skin, and hang them up in a clean place. If you have got "stuck," and haven't time to clean the cups, put them in water until the following day.

[TO BE CONTINUED.]



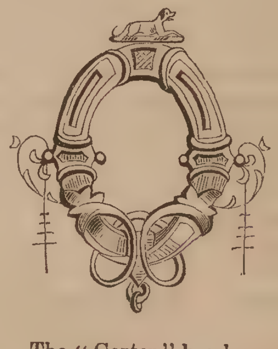
Shield and Monogram.—This ornament will look very neat if it is well executed. It is a Norman shield, with the U. S. colors, and the letters S T forming a monogram.

The sides are drawn from a circle about three inches in diameter; the curves at the top by the use of a circle three-quarters of an inch in diameter. The upper division of the shield is nearly one-third of its length.

Lay in the outline, stars and scrolls with gold; the diagonal bars, red, white and blue; the monogram to be painted last.

In mixing the colors, red, white and blue, use subdued tints of each; and instead of filling in the spaces solidly, take a fine pointed sable pencil and cross-bar them, which will give a very pleasing effect. S T should be painted so as to show plainly over the bars. Those parts which run on to the red may be painted a lighter red; on the white, a brown, or dark greenish tint; on the blue, lighter blue.

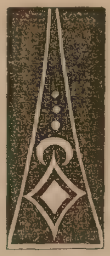
The upper space surrounding the stars will need only a few perpendicular lines from the centre each way toward the edges, leaving the ground color of the panel to form the shades. If properly executed, these will give the swell required on that part of the shield.



Garter.—The "Garter" has been used as an ornament on carriages in this country for a number of years, and is still used, more or less. The original design here given may be acceptable to those who like this style of ornament.

Lay in all gold except the *crest*, light and shade as shown. When the shading is dry, wash over the markings on the garter with carmine, verdigris, or any other transparent colors your taste may suggest.

The vine and leafing at the base may be left plain gold, or washed over with a delicate pea-green tint. White, gray of two or three tints, and burnt umber will be sufficient to delineate the hound; the wreath, paint with colors to contrast with those nearest to it on the garter.



Pattern for Spoke Face.—This design will make a neat finish, and will not consume much time in executing it; the centre in gold, the striping in color would be attractive.

Brookville, Md., April 2, 1869.

Mr. Editor.—Having some trouble last summer with my painter about his paint blistering, and thinking he did not mix his paint right, I will give you the way he says he mixes each coat in painting bodies, and hope you will let me know if it is right.

He says: first, he primes the body with lead mixed with oil, without turpentine or dryer, giving seven days for the prime to dry. Next he mixes the lead with japan to dry dead, with no oil in it, giving four coats of this, four days for each coat to dry. Next he mixes the filling with yellow ochre and lead to dry hard, giving four days for each coat to dry; then rubs the body to a surface, and gives it a coat of dark lead mixed very stiff with oil, and dried with patent dryer, giving six days to dry. The color he mixes stiff with oil, dried with japan, and thinned with turpentine, giving two coats of color, and four days for each coat to dry. Then four coats of rubbing varnish, five days for each coat to dry, and one coat of Noble & Hoare's finishing varnish.

Let me know by the Journal, and oblige,

A Subscriber.

Answer.—In the first place we would direct your attention to the words used in your first sentence, viz: "Having some trouble *last summer*, &c." Now, it is evident that *heat* was the cause of the blistering, and as the painter was not responsible for the degrees of heat which the thermometer may have indicated at the time or times when the work blistered, so far, the painter should be free from blame.

He has put on the priming coat according to the usage of painters in the best shops, where they prime with lead instead of "Permanent Wood Filling." The four coats of lead which you say he then gives to dry dead, and four days for each coat to dry, we can find no objections to, provided he uses wet lead instead of dry lead, for we would not recommend the use of *dry lead without oil*, for the foundation coats. The filling he mixes to dry hard, giving four coats, and four days for each coat to dry. We have no fault to find with this.

Having rubbed the body to a surface, you say "he then gives it a coat of dark lead mixed very stiff with oil, and dried with patent dryer, giving six days to dry." Here we might raise an objection, and that is, if this dark lead coat dries with much gloss, it may interfere with the due hardening of the after coatings. But if your painter has given only a slight elasticity to the dark lead coat, making allowance for the oily nature of lamp-black, we still have no objections, for inasmuch as the four lead coats were put on *dead*, also the four *filling* coats to dry hard, a small quantity of oil in this dark lead coat would do no injury, and we incline to the belief that it would be beneficial, provided there was no excess of oil used in the color coatings. We think your painter uses rather more oil in the *color* than is necessary, but as he gives *four* days for each coat to dry, there would be no objection, if the color, at the expiration of that time, is firm without gloss. We speak of a gloss occasioned by the use of oil in excess. The time given between the coats of rubbing varnish is sufficient to make a good job, and this brings us to the finishing coat, Noble & Hoare's English.

In the application of English varnish to the surface, we place in contact a soft, oily and highly elastic coating with a hard and comparatively brittle under coating. English varnish, especially Noble & Hoare's, penetrates and softens, to some extent, the under coatings, and still retains its softness, or elasticity, a great length of time, and we think is more liable to blister on this account, when exposed to the direct rays of the sun, or the reflection from a pavement, when the carriage stands for any length of time in one position. In our experience, a glossy coating, not thoroughly dry, will blister much quicker than a firm "*dead* coating." The extreme heat causes an evaporation, which, in expanding, forms the bubbles or blisters. A body may blister when the panels are not thoroughly dry. The dampness in the wood, being changed by the action of a steady heat on the panels, would, in its expansion, form blisters. In burning off an old coach, where the varnish and paint has become dry, lifeless and cracked, it will be noticed that it requires considerable heat to start up the coatings, while if the same amount of heat is thrown on a freshly varnished surface it will act much quicker.

Work, then, should be thoroughly dry before being run out; but as English varnish does not dry *perfectly* hard, it will blister when exposed to the scorching rays of the sun, or a reflection from the sidewalk.

We do not think the painter to blame for your work blistering, as he gave so much time between coatings, for it is usual in the largest shops in the country to give a coat of color every day, and even two coats a day, *no oil* being used in this case.

We invite correspondence on this subject of blistering; let us hear from you, brother painters; the columns of the Journal are free and open to you, and differences of opinion will not be construed to mean anything more than a difference in experience. Valuable information may thus be given to the readers of the Journal, and the trade be generally benefited.

"Subscriber."—Question 1st.—"How to remove old paint from body, or prepare it so the cracks will not show."

Answer.—There is only one way to repaint an old body so that the cracks will not show, and that is, to get them all out first. There are a number of ways practiced by different painters. Where the cracks do not go deeper than the varnish, use *aqua ammonia*, spreading it on with a sponge. It will soften the varnish so as to scrape off readily with an ordinary scraper, and will not injure the paint under the varnish. If the filling and paint is cracked, then you must take all off, either by blistering with hot iron, or burning off with turpentine and alcohol, mixing about equal proportions, spreading on a small surface at a time and setting it on fire, using a chisel or sharp instrument to scrape while the old paint is warm.

Ques. 2d.—(Will answer in future number.)

Question 3d.—"The best and cheapest *lake*, suitable for carriages."

Answer.—The *best* and *cheapest* lake that will bear more handling by the painter, or, in other words, a lake that the painter can vary the shades the most by his ground color, is *crimson lake*, quoted in the Journal at $3.50 per lb.

Nineveh, N. Y., April, 1869.

Mr. Editor—*Sir:*—We are more than pleased with the Journal, and have been *profited already* (6 months) more than three times the subscription price for one year. If Mr. P. Alette would answer the following he would confer a favor.

In varnishing--give process of putting on, what brush you use to put on the varnish, and what to level it; and which way do you draw the last brush, supposing the body to set level on a tressel?

Answer.—This correspondent asks a most difficult question—the process to put on and level varnish. We have been working at the business some eighteen years or more, and during that time have endeavored to explain the process in the shop, to both man and boy, and, we believe, as often failed. The art must be acquired by practice. When the painter can tell by the working of his brush over the panel that the varish is level, then he can reasonably suppose he has acquired the art. It makes but little difference which way he draws his brush last.

We have been using Thum's Half Elastic Brushes for years, and find they answer all purposes. We seldom use a brush larger than 2½ inches.

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

ABOUT STOCK.

There is very little, if anything, new to record this month in the matter of styles. I notice but very little change in manner of trimming work; in fact, the trimmers around here appear to have done nothing for fashion this spring, as yet, and I cannot find anything worth recording in that way. Perhaps, next month we may be able to present something new; in the meantime, it may not be out of place to give a short space to the matter of stock, by showing how much it takes for each of different standard styles of carriage. This may be made useful as a reference, for how often are trimmers asked: how much cloth will it take to trim this or that job? and how many of them can answer right off? Very few, I think; and they are consequently embarrassed if an estimate has to be made promptly. In such cases, this may be useful:

For a coach: 12½ yards of cloth; 3 yards extra if cloth lace be used.

For a four-seated phæton, with child's seat: 4¾ yards of head lining cloth; 3½ yards of body lining when both seats are trimmed with cloth, and with a cloth driving cushion.

For a roll-up-top buggy: 4½ or 5 yards of head lining cloth, piece the curtains or not; 1⅝ yards of body lining.

For a six-seated phæton, with dickey seat: 4¾ or 5 yards of head lining; 4¾ to 5 yards of body lining.

For a four-seated coupe rockaway: 11 yards of body cloth.

For a six-seated rockaway, with partition: 13 yards of cloth; if cloth lace be used, 3 yards extra.

For a brett: 10 yards of cloth; if cloth lace be used, 2 yards extra.

For a full Clarence: 13 yards of cloth.

For a circular front coupe: 8 yards of cloth; if cloth lace be used, 2½ yards extra.

Poetry.

For the Coach-Makers' International Journal.

"But the Greatest of these is Charity."

BY MRS. J. T. GURNEY.

Oh! with what stifled, reeking breath
The dry, hot air slow through the window creeps,
Telling of dire disease and death,
Awak'ning me from short and troubled sleep.

Alas! what voices do I hear?
Curses and oaths from out the mouths of men
Who should be in the house of prayer,
For, sure the Sabbath, too, was made for them.

The grand church 'round the corner there
Is filled with worshipers, both great and small,
But they are of earth's favored ones,
And these, alas! these have no God at all.

We know one heaven keeps watch o'er both;
We know one God is Father to us all;
We know not why, if this is so,
Why some are left to grope 'neath misery's pall.

But as it is so, surely we,
Who, blest with all that money can procure,
Escape temptation's dark and miry sea,
Might stretch a hand to save God's helpless poor.

Some, it is true, act well their part,
But these are very few and far between;
Too many sit in idleness and sloth
And keep from mixing with the low herd, clean.

There are, who, dressed in silk and lace,
Come rustling up the isle on Sabbath morn,
To listen to the words of truth and grace
That from the preacher's lips come full and strong.

"I preach unto you these things three"—
This from the blessed Master's lips did fall—
"True faith, and hope, and charity,
But the last is the greatest of them all."

Thus reads the text, the pastor says,
And thereupon with eagerness exhorts
His hearers to a nobler life—
To one less frivolous, more full of thought.

And, warmed by each preceding word,
He pours into their quiet, list'ning ears
Words full of scathing, stern rebuke,
To those who've wasted all these precious years
In luxury and idleness;
And, scanning then his flock with eager eye,
He looks to see which heart responds—
Which face to his says, sadly—"It is I."

Alas! the men with wrinkled brows
Deep in to-morrow's business seems to be,
While their companions' faces say—
"Surely this truth cannot apply to me;

I pay into the foreign fund
A sum quite large, each quarter, I am sure—
Money and bibles, clothes and time,
I spend—and for the far-off, heathen poor."

Aye, that is just the point—far-off
They are, and at our very door we find
Trouble and sorrow caused by need
Of all this money—all these clothes and time.

That woman clothed with rags and filth;
That other, on whose face disease and crime
Have written traces plain to read;
That little, half-clad, begging child

Will haunt us day by day and year by year
'Till we a nobler charity have learned,
And carried in our breasts this lesson true—
That charity begins, although not ends, at home.

Remedies and Receipts.

Katie's Cake.—One half cup of butter, one cup of sugar, one cup of milk, three eggs, two cups of flour, two teaspoonfuls of cream-tartar, one teaspoonful of soda; flavor with lemon.

To Clean Paint.—Smear a piece of flannel in common whiting, mixed to the consistency of common paste, in warm water—rub the surface to be cleaned quite briskly, and wash off with pure cold water. Grease spots will in this way be almost instantly removed, as well as other filth, and the paint will retain its brilliancy and beauty unimpaired.

Another Way to Wash Flannels.—People are continually complaining how impossible it is to wash flannel clothing so as to prevent it from shrinking. By putting a little borax into cold water, it will be found that flannels will not only come out better cleansed, but there will be absolutely no shrinking.

Lemon Cheese Cake.—One pound of sugar, broken small, six eggs, leaving out the whites of two, the juice of three fine lemons, and the rinds of two grated, and one-fourth of a pound of fresh butter. Put these ingredients into a pan and boil them gently over a slow fire, until as thick as honey. Pour it into a small jar, and tie it down with brandy paper. One teaspoonful is sufficient for a cheese cake. It will keep good two years.

Powder to Clean Silver.—Take powdered cream-tartar, 2 ounces; fine chalk, 2 ounces; alum, 1 ounce. Mix together these three substances; rub the silver with the mixture reduced to paste with a little water; wash it well and dry it. Old silver thus treated assumes the appearance of new.

Scraps of Humor.

A richly-dressed lady stopped a boy trudging along with a basket, and asked—"My little boy, have you got religion?" "No, ma'am," said the innocent, "I've got potatoes."

"That's very singular," said a young lady to a gentleman who had kissed her. "Oh, well, my dear miss, I can make it plural."

A little fellow had a dirty face, and his teacher told him to go and wash it. He then went out and stayed for a few minutes, and then came back with the lower half of his countenance tolerably clean, and the upper half wet and dirty. "Johnny," said the teacher, "why did you not wash your face?" "I did wash it," said Johnny. "Why did you not wipe it, then, all over?" "I did wipe it as high as my shirt-tail would reach," was Johnny's conclusive reply.

Couldn't Subscribe.—A pair of those interesting, entertaining ladies, who seem to carry on so large a business in the way of procuring subscriptions for new works, and who are so delightfully importunate, so sweetly un-get-rid-able, called a short time since at the office of a young lawyer for the purpose of getting him to subscribe.

"Indeed, ladies," said he, "the partnership of which I am a humble member, has lately been so imprudent as to issue a new work of their own, which, in consequence of the enormous expense attending its illustrations, embellishments, etc., has completely crippled us."

"Then, perhaps," replied the angelic canvasser, "we could procure you some subscribers. What do you call your work?"

"Well, we have not fully determined as yet; but I guess I'll let my wife have her own way, and call it after me—Charles Henry."

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

Wanted—Immediately, a first-class Carriage Painter. Inquire or address Dikeman & McCracken, Hackettstown, New Jersey.

Wanted—A first-class Carriage Painter. *Fare paid.* Address O'Neill & Davis, St. Joseph, Mo.

Wanted—A situation, under instructions, at Carriage Wood-work. Address J. G. Marple, Spring Garden, Penna.

Wanted—Every carriage-maker to notice my advertisement, and send for full description and terms of patent right. Chas. M. Foulke.

Wanted—Coach-Makers everywhere to try the Lawrence Jump-seat. It is far superior to anything in the market.

Wanted—Coach-Builders to notice that my address is changed to 142 Second street. See advertisement. Adolphus Muller.

☞ Don't fail to read English & Mersick's advertisement.

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Felton, Rau & Sibley, Philadelphia, Pa.
Kemper Brothers, Cincinnati, O.
Mackenzie Brothers, Baltimore, Md.
E. Jenkins & Son, " "
The Bridgeport Spring Co., Bridgeport, Conn.
Scott & Day. Philadelphia, Pa.
James W. Queen & Co., Philadelphia, Pa.
Janentzky & Co., " "
Edward Smith & Co.. New York.
Minette & Co., New York and Philadelphia.
Carswell & Vandenbraak, Wilmington, Del.
Hoopes Bro. & Darlington, West Chester, Pa.
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Wm. Burwell, Philadelphia, Pa.
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Busser & Miller, Sidney, Ohio.
English & Mersick, New Haven, Conn.
New Haven Folding Chair Co., New Haven Conn.
Flesche & Perpente, " " "
Barber, Sheldon & Co.. Auburn, N. Y.
Chas M. Foulke, Philadelphia.
H. E. Murry, Chester, N. Y.
R. H. Wright, New Bloomfield, Pa.
C. P. Kimball Company, Portland, Me.

AUTHORIZED AGENTS.

Persons desiring to act as Agents for the JOURNAL, will be required to satisfy us of their responsibility and integrity. Those published as Agents are authorized to receipt for subscriptions so long as their names are continued on this list.

Charles W. Veatch, General Traveling Agent.
George B. Hamilton, Agent for Felton, Rau & Sibley.
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E. H. Murray, agent for Felton, Rau & Sibley.
E. Huested, agent for Felton, Rau & Sibley.

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, April 20, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.
Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 35 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.: No. 3, 92c.: No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.
Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50
Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.
Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.
Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.
Basket-wood imitation, for panels, per foot 60c.
Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.
Bolts, Phila, 35 per cent. discount from list. Clip King bolts, per dozen. Nos. 1 and 2, $3.50.
Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1; 1 inch, $1.30.
Buckram, per yard, 16 to 20c.
Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.
Castings, mall, per lb., 13c.
Cord, seaming, per lb., 25c.
Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
" body, per yard, indigo wool-dyed, $3.75 to $4.50.
Coteline, per yard, $4 to $8.
Curtain frames, $1.10 toper dozen, japanned and silver, 1.50.
Damask, German cotton, double width, per piece 30 yds., $16.50; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 75c. per yard.
Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.
Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.
Drugget, felt, per yard, $1.35 to $2.
Enameled cloth, per yard, muslin, 5-4, 33c.; 6-4, 50c.; drilling, 5-4, 46c.; 48 inch, 48c.; 6-4; 62c.; duck, 5-4, 65c.; 50 inch, 70c.; 6-4, 80c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 60c.; 48 inch, 62c.; flock drill, 48 inch, $1.00; do., muslin, 85c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 55 cents.
Felloe plates, wrought, per lb., 16c.
Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.
Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.
Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.
Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.
Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.: silk stripe, 9½c.; silk barred, 12½c.
Lamps, per pair, fine, $15 to $20.
Leather, per foot, dash, No. 1, 15c., do., No. 2, 12c.; railing and collar, 25c. to 28c.; enameled top, No. 1, 26c. to 28c.; do., No. 2, 24c.; enam. trimming, 25c.
Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.
Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.
Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.
Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.
Moss, per lb., 10c. to 15c.
Name plates, per do., en., German silver, $4 to $4.50.
Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, patent black, $11.75; do., Bright, $13.75; Baltimore patent black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
" Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $2.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95. 1⅛, 2.10; $1¼, $2.25.
Shaft Sockets, ball, ¾ inch, $2.05; ⅞ $2.20; 1 inch, $2 35; 1⅛, $2.50; 1¼, 2.65.
" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.
" ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8; 5 bows, $10.50.
Slat irons, wrought, N. Y. pat., per doz. sets, 4bows, $12
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.
Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.
" Bright tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.
" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.
Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50: ⅝, $1.70.
Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.
Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.
Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.
Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.
Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.
Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.
Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.
Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,
Tufts, per gross, common worsted, 18c.
Twine, tufting, per lb,, No. 16, 55c.; best mattress, 85c.
Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.
Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.
Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.
Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.
Whip socket fasteners, $3.25 per dozen pairs.
Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.
Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.
" white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.
Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in. diameter, $2 to $2.25 per set,
Poles, hickory, per dozen, rough, $12: finished, $16.
Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.
Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.
Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.
Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.
Seat arms, per dozen pairs, $1.25.
Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.
Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4: unfinished, $1.38.
Wheels, finished, hickory, buggy, $10 to $18 per sett.

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CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00: finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.: refined English drop, 30c.; No. 1 English drop, 25c. ; No. 1 pat. drop, 20c. ; Eddy's refined lamp, 40c. ; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c. ; B, 50c. ; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.: pure emerald, 45c.; pure Paris, 45c.: Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.50; deep, $1.40; Ger. goto. pale, $1.50; deep, $1.50: Chinese, $1.60; Trieste, $1.25; Italian, 45c.; American, 35c.: Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 14½c.: Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.: Cremnitz, for striping, 35c.: whiting, 4c.: pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 65c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.: pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8: small, $6.50.

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COACH-MAKERS'
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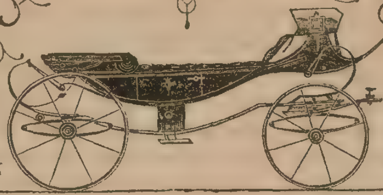

SPECIAL NOTICE.

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OUT OF WORK.

The above may be thought, at first sight, out of place for a heading at this season of the year, when all, who so desire, can find employment. But, if we can, in this article, influence any, or throw out any suggestions that will tend to prevent this oft-repeated expression during the long dull winter months, our object will be attained.

The causes that place a person in this position are the first to be looked after. Dullness of trade is the leading cause, but for this the journeyman is not responsible. During the spring and summer months, coach-making is generally brisk, and with the large amount of repairing usual, an extra number of hands are required, and the consequence is that when fall comes the force is necessarily reduced, and many are obliged, for months, to give vent to the expression "out of work," and, as a general rule, it is that class of persons, who, during the busy season, have been improvident, spending their earnings—in many instances, uselessly. Few know the extent of suffering and deprivation to those thus situated.

It is a well known fact, that there is, and always will be, a surplus of hands in the winter season, or a deficiency in the spring and summer, and the question that interests each one, individually, is "how can I conduct myself so as to secure steady employment?"

In the first place, perfect yourself as much as possible in the branch in which you are engaged, make yourself useful to your employers; this is the season of the year when you can make the impression that will secure you against discharge. Because hands are scarce, do not assume too much of an independent spirit, and, because your employer cannot well do without you, make exactions that are not just and proper. It is not necessary for one to sacrifice manliness in order to be obliging or accommodating. A willingness to do will be remembered by the employer when he is reducing his force.

Reliability is another important trait in the character of any person. If, when he leaves the shop, his employer feels there is no dependence to be placed on seeing him the following day, and his job is delayed in consequence, it is treasured up against him, and in the end works greatly to his disadvantage.

If a man is at his post during the busy season, unless something special prevents, and his employer can safely trust him in promising a customer, he becomes an important auxiliary. Look, for instance, through the shops where you are acquainted. What is the character of the men who retain their situations winter and summer, and receive the best pay? Are they not men who take an interest in their employer's welfare? Who are obliging and anxious to please? Who have not such straight notions of independence as to believe and *act* in busy seasons as though the boss was their servant? Who are reliable and can be depended upon? Who are competent workmen?

In how many instances do we find that hands are kept on *only* because they have discharged their duties faithfully, when their services were most needed. There is, and always will be, in the minds of some, a false pride of independence; it is shown both in the employer and journeyman. In the busy season, the jour feels that his services cannot be dispensed with, and he takes the opportunity to pay off some old grudge, or supposed wrong he has received, when work was slack, and as the result, in many instances, it is remembered against him, and he is obliged to sit in his cheerless and cold chamber, shivering "out of work," out of money, no friends, and wishing for an opportunity to wreak vengeance on those he has forced to cast him off. How much better it would be for each one to try and make his services indispensible where he is engaged, securing the good-will of all, and, as a consequence, better remuneration.

But we must not close this article without referring briefly to the other side of the question, by changing one word of our heading, putting in its stead "out of hands." There are some employers *always* in want of hands; their names have become a regular by-word among the workmen. If a person is "out of work," his comrades say "go to ——'s shop, he always wants hands."

A few of the causes are, false independence, over-bearing disposition, using those in their employ as though they were slaves, forcing all the manliness out of them, or obliging them to leave; poor pay, they want their work done for about half what it is worth, and are disposed to find fault in order to save a few dollars; they take advantage of the necessities of those in their employ by reducing wages in dull seasons; very slow pay, obliging their men to wait and get along, as best they can, &c.

As a consequence, you very seldom find a hand stopping with them long; it affords a kind of holding on place until there is an opening, and then he is left without hands, his customers disappointed, and his prospects of success greatly lessened; besides the many discouragements and losses attending the constant introduction of new hands, and of a class generally the poorest.

It is a mistaken policy on the part of boss or jour to act as though they were not dependent on each other. There is a certain amount of respect due from each position, and those who fail to discover it are themselves the losers.

☞ The "Sarven" Wheel furnished by the New Haven Wheel Company. See advertisement.

NOTES BY THE WAY.

Niagara Falls, May 11, 1869.

Ithica is situated in Central New York, at the southern extremity of Cayuga Lake. It is surrounded by mountains, and occupies a low flat piece of ground, which is not favorable to health. We arrived here by the Delaware and Lackawanna and Western Railroad. The train on arriving at the hill top overlooking the city, stops and allows persons who wish to take the short cut down the hillsides to do so. The train is then backed down to the regular track and begins the descent by a circuitous route, which finally brings the traveler to the low swampy ground about on a level with Cayuga Lake. In fact, we came to the mountain top, and had a full view of Ithica; then we backed away from Ithica; next we approached Ithica, aftewards turned our backs to Ithica, and ran a mile or so away from it, then crossed the swamp, running sidewise to Ithica, and at last headed towards Ithica, and actually arrived at Ithica, but not until we had spent about an hour trying to get there.

We arrived at dark on Saturday evening, April 17th. On Sunday, we were invited, by a friend, to take a stroll out to Cornell University, and to the streams near by called the Cascadilla and Fall Creek. (In the May number, Six Mile Creek should read Fall Creek.) In a small guide to the scenery about Ithica, the author says: "Ithica boasts of her seven streams, concerning which she challenges the world." The writer, also gives the following advice: "If you find yourself in the social mood, pile up a "democrat," (the Ithica name for a platform spring wagon with three or four seats,) with genial laughter-loving friends and go to Goodwin's. If your 'soul is dark,' take a sunshiny day and wander among the woodland paths that border the Cascadilla, or through the Ravine of Buttermilk. If you feel that you need to be sobered and solemnized; if you yearn for what Thoreau calls the 'wild;' if your poetry has gone to seed and your bump of veneration is flattening apace, hie to Fall Creek and spend an hour on its overhanging cliffs, listening to the boom of the cataract, or lose thyself in the twilight shade and primeval solitudes of Lick Brook. If you want a pleasant varied stroll, without being burdened with any particular object, except to enjoy a good walk, hand in hand with nature, take your lunch and book, say Thoreau's excursions, or Bryant, and explore Six Mile Creek."

We visited only the Cascadilla and Fall Creek, not having time to spend a week and see all the beauties in store for the man of leisure. The Cascadilla is the Ithicans' "pet stream." After being freed from its rocky bed among the hills, it runs quietly through the city, emptying into the lake. Its banks are bordered with willow trees, forming a delightful promenade.

"Fall Creek comes pouring through a dark and shadowy defile of towering cliffs on which tall pines stand as sentinels." Ithica Fall, on this creek, is the largest and most terrible body of water at Ithica: it is about 159 feet wide, and plunges down 150 feet into the gulf below, raging and forming, and to me as awful as Niagara. We viewed it from above by climbing down to the edge of the precipice and holding on to a pine. Oh, that fearful height! the seething, angry waters below, and the sullen roar as it came up, inspired us with awe, and we felt as if the voice of Jehovah was thundering in our hearing. "What is man, that thou art mindful of him?" Taghanic Fall, ten miles from Ithica, is 215 feet high, rocks on the side of the ravine are 280 feet high.

But we must hasten. There are two or three pretty good carriage shops at Ithica, Mr Hoyt's being the largest. The "democrat" appears to be the favorite vehicle; in fact, this style of wagon is very popular throngh this section of New York. We saw the best painted wagons at Moore & Ross', in Owego. We left Ithica at 8 o'clock, A. M., Tuesday, on the lake steamer Sheldrake, for Seneca Falls, arriving at the town of Cayuga at 12 M., and took the train for Seneca Falls. The track is on made ground, and crosses the lake diagonally. From Seneca Falls we visited Waterloo and Geneva, situated on Seneca Lake. From Geneva, by rail, to Auburn; thence to Syracuse, Rome, Utica, Oneida, Canastota, back to Syracuse and on to Oswego, back again to Syracuse, and have since visited Baldwinsville, Weedsport, Clyde, Lyons, Palmyra, Fairport, Rochester, Canandaigua, Penn Yan, East Bloomfield, Batavia, Medina, Lockport, and am now writing in hearing of the roar of Niagara, as it pours its 1,666,000 tuns of water, every minute, over the fall. We visited the Falls to-day, and viewed them from several points. Nineteen years ago we saw them the first time. To-day is our second visit, and we find no perceptible changes. Down! down! the restless waters plunge in continuous and sublime grandeur. While standing on Terrapin Tower, we saw the British flag raised on the Canada side, and we confess to a strange feeling which lasted but a moment. We crossed the Suspension Bridge and strolled beyond the Clifton House, but as the twilight was fading, we retraced our steps, fully satisfied with our visit. To-morrow we push on to Buffalo.

BOOK OF DESIGNS.

In the "Want Column" will be found the advertisement of C. Palm & Co., who offer to forward by mail a copy of their book containing 100 designs of Carriage Ornaments, on the receipt of fifty cents. Copies of the same have been sent to our office, where they can be obtained on receipt of price. Every coach painter should have a copy.

☞ If you want any carriage goods, carriage woodwork, bent panels, &c., read advertisement of Roberts & Phillips'.

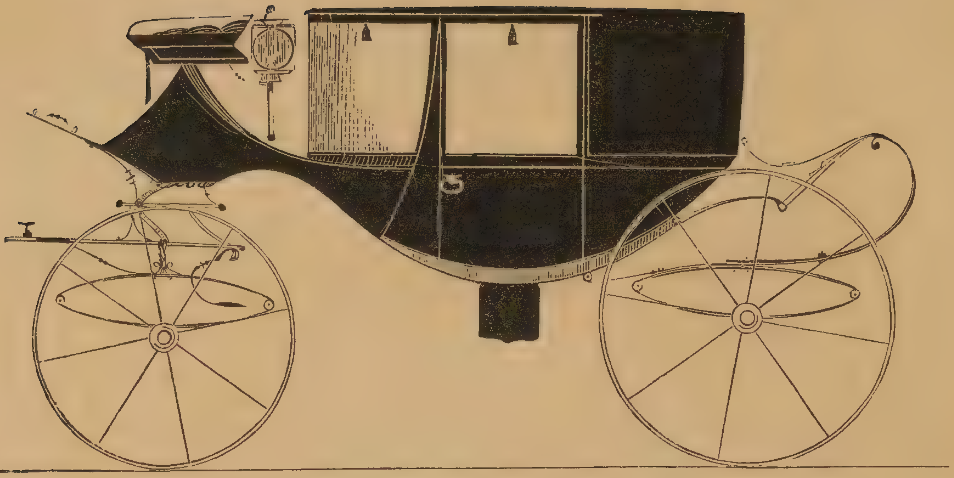
GLEANINGS.

The total quantity of coal mined in Pennsylvania and sent to market, from 1820 to 1863, was 114,789,535 tons. This quantity, in bulk, would make a solid column 660 feet square at the base, and 6,000 feet high, and by weight equal 76½ millions cords of wood. * * Bituminous coal was changed into anthracite by external chemical influences, which freed it of hydrogen. * * Cunningham & Son's carriage factory, at Rochester, N. Y., is 80 feet front by 275 feet deep, three stories high. The wood and blacksmith shops form a wing 100 feet long The machine shop is three stories high, and 150 feet long. Lumber sheds cover about an acre of ground. They build light and heavy work. A visit to the shop is a curiosity to even a carriage maker. * * The accumulated waters of Lakes Superior, Michigan, Ontario and Erie, find their outlet through Niagara River, and furnish the Falls with their ever drooping waters * * A carriage maker did not want the Journal because he had rheumatism, headache, and was going into the wagon business. * * When you wish to visit a pretty town, go to Binghampton, New York. * * The suspension bridge, below Niagara Falls, is 1,262 feet long. There is *at present* but one guard at each end—an Irishman on the American side, and a Canadian on the Canada side. 100,000,000 tons of water pours over Niagara Falls every hour. The water on the Horse Shoe Fall is about 20 feet deep. * * The prison at Auburn, N. Y., covers ten acres. The cupola is surmounted with a statue, representing a Continental soldier at a shoulder arms; within, the *stripes* minus the *stars* predominate.

NEW ADVERTISEMENTS.

New Haven Wheel Co., York street, New Haven, have one of the largest establishments in the United States. Having the opportunity, we recently visited this mammoth concern. Carriage woodwork, in all its various conditions, from the rough plank, (and even logs as they came from the forest,) to the finished work. It seemed as though there was no end to machinery, and material in process of manufacture. One section of the establishment is devoted exclusively to the manufacture of the "Sarven" wheel, which, without doubt, is superior to the ordinary made wheel. We shall take occasion to refer at more length to this extensive manufactory, at some future time. See their advertisement, and send them your orders, and we doubt not they will receive prompt attention and prove satisfactory, for we were told by a first-class carriage-maker, who accompanied us, that we need have no hesitancy in strongly recommending their work.

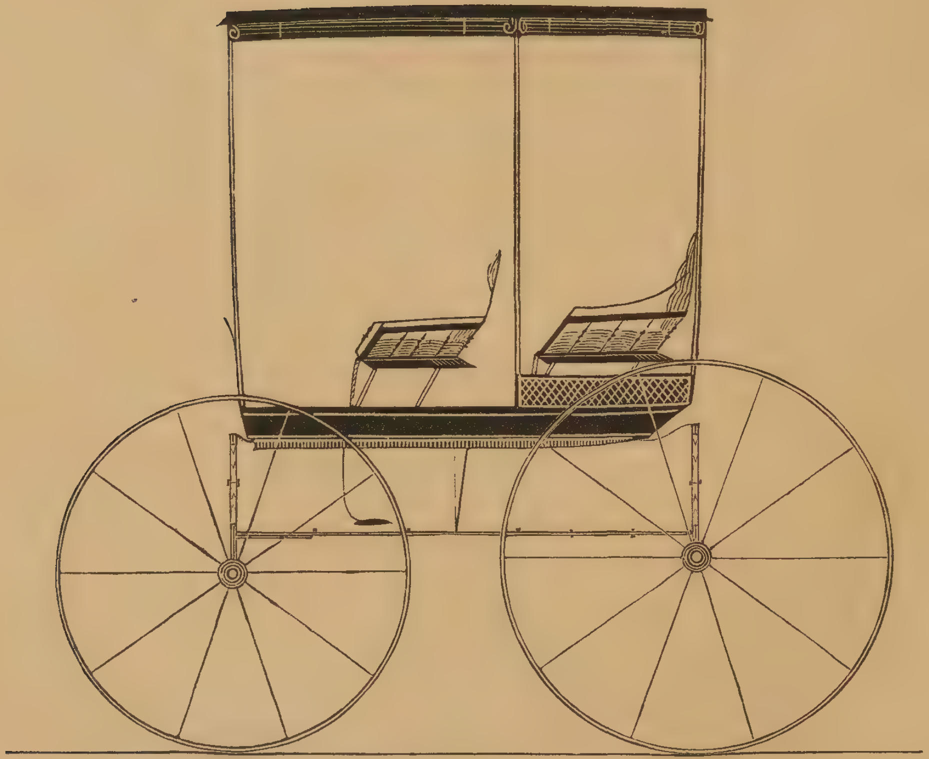
B. K. Mills & Co., Bridgeport, Conn., coach lace manufacturers, will be found the most pleasant men to deal with it has been our good fortune to meet, and the quality and character of



FULL CLARENCE, MEDIUM SIZE.

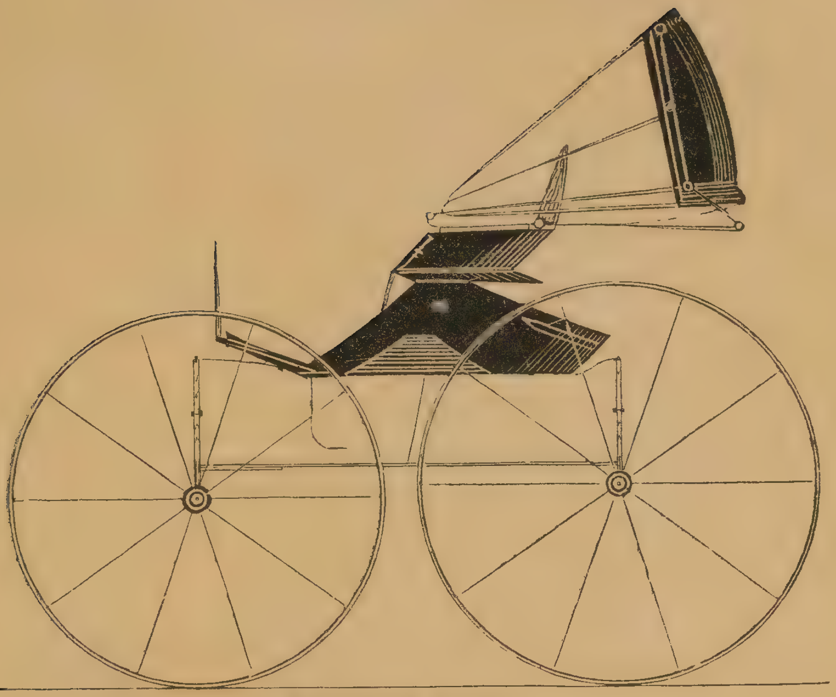
(Drawn by Edward Wells, New Haven, Conn.)

Plate No. 33.—Three-eighths Scale.—Explanation on Page 133



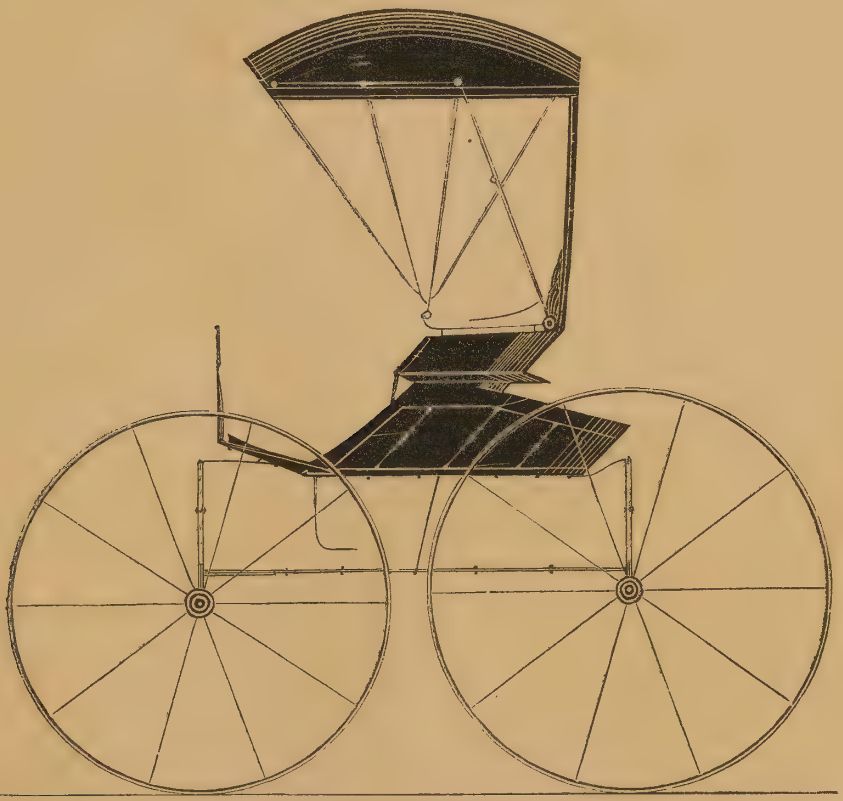
BUCKEYE JUMP SEAT.

Plate No. 34.—Half-inch Scale.—Explanation on Page 133.



KEARNEY BUGGY.

Plate No. 35.—Half-inch Scale.—Explanation on Page 133.



BELGRAVIA.

Plate No. 36.—Half-inch Scale.—Explanation on Page 133.

their goods are unsurpassed. Don't fail to see their card and give them a trial.

Roberts & Phillips, Philadelphia, Penna., dealers in carriage goods of all descriptions. Carriage wood-work made a specialty. We noticed Buggy Bodies, a very beautiful pattern, made after our description of the "Kimball" buggy, in January number, with panels bent in one piece, also sills and seats, making the most complete and durable job out. We are authorized to say that the "*bent panels*" can be obtained on application to them, and we believe they are destined to wholly supersede any other kind of round corner.

O. W. Swift, New Haven, Conn., manufacturer of carriage hardware, coach lamps, &c. Our readers will be glad to hear of a good reliable place for bending coach glass. Any orders sent to Mr. Swift will be attended to in a prompt and satisfactory manner—see card in advertising columns.

Charles H. Pardee, New Haven, Conn., coach lace manufacturer. Having seen a sample of his goods in the "Killam Landaulette," given in May Journal, we feel assured his goods will compare favorably to any other establishment.

New Haven Steam Saw Mill Company, having commenced the manufacuture of Carriage Wheels and Wheel Material, claim a share of public patronage. Their facilities for supplying the demand for this branch of coach-making are superior to many others, and we trust our patrons will give them a trial. See their card.

Christian Kunzig, Philadelphia, by his ingenuity, has succeeded in inventing a concealed hinge for coach doors, superior to anything ever brought to the notice of the public. It is made of brass throughout, and is so arranged that by removing one small brass screw the door can be taken off, avoiding the necessity of removing the screws that fasten it to the door or pillar. It is pronounced by the leading carriage makers, who have seen it, to be just the thing long desired. By reference to his advertisement a cut of the same can be seen.

John B. Vanhorn has started a Bending Establishment in Philadelphia, where all bent carriage material can be obtained. Don't fail to see his advertisement.

C. S. Bugbee, Batavia, Ill, comes before the public with an improved Whip Socket. We have the promise of a cut for next number—see advertisement.

Special attention is also directed to those who have enlarged and renewed their advertisements, thereby showing the estimate they place on the advantage to them of the use of our columns. Hoopes, Brother & Darlington, Edward Smith & Co., Flesche & Perpente, Mackenzie Brothers, E. Jenkins & Sons, Kemper Brothers, Casper Disser, Wm. Burwell, Bridgeport Spring Company, A. Muller, Fitzgerald & Flagg, and Hale Washer Company.

Fashion Plates Explained.

FULL CLARENCE, MEDIUM SIZE.

Plate No. 33.—As promised last month, we present our readers with this beautiful design, drawn by Edward Wells, of the firm of Wells, Crittenden & Co., New Haven, Conn. When we were promised the drawing by Mr. Wells, our expectations were for something greatly superior to anything of the kind ever given to the public, and, in all candor, we must say they have been fully realized, and the wide reputation Mr. W. has obtained as a draftsman will not suffer in the least in the production of this finely proportioned and neat Clarence. We would have preferred it drawn to half-inch scale, it being our usual size, but knowing the superior talent of the artist sending it, we thought best to give it to our readers without any variation. It is drawn to three-eighths' scale with as few lines as possible. The moldings are not drawn, simply outlines. Under the dickey seat you will observe a rounded neck panel.

For dimensions, trimming and painting, we refer to the same class of work given in previous numbers.

It is gratifying to see the interest manifested by such well-known establishments as Wells, Crittenden & Co., H. Killam & Co., and others, in behalf of the success of the Journal, and we promise that no effort on our part shall be spared to place before our readers the latest, best and most practical designs to be obtained, both heavy and light.

BUCKEYE JUMP-SEAT.

Plate No. 34.—This carriage is designed expressly for a light business wagon. It is convenient and neat, and can be made a very respectable summer carriage. The jump seat is well adapted for it, affording at all times the convenience of an extra seat without its being in the way when only one is required. We would, however, caution all against using the jump-seat without first obtaining the right to do so, as will be seen by advertisement in Journal, the owners are determined to prosecute those so doing. The front seat is held in position by a hook, and when used for one seat only, is turned down, and back seat jumped over it. Width of body between pillars, 40 inches.

Dimensions: Hubs: 6½ by 4¼. Bands: front, 3 inches; back, 3⅝. Spokes: 1 1-16. Tire: 1 by 3-16, steel. Axles: 1 inch, steel. Wheels: 3 ft. 10 and 4 ft. 1. Track: 5 feet. For country, or hard usage, the dimensions should be proportionably heavier.

Trimming: leather.

Painting; black, striped with carmine.

KEARNEY BUGGY.

Plate No. 35.—With many thanks to our *modest* friend in the Bay State, (who would not permit his name to be used,) we insert this month his beautiful design. Much depends on the manner of finish to make it please the eye; in fact, however pleasing the design, a job is very often spoiled for the want of taste in finishing.

In the January number, we gave design of "Kimball" buggy, and illustrations of a new mode of making round corners, the panels and sills in one piece; since which, we have received many inquiries as to where they can be obtained, and we are pleased to state that our ideas have been carried out, and they are now on sale by some dealers. (Roberts & Phillips, 116 North Third street, Phila., are prepared to fill orders for panels, both body and seat, also bodies ready made on the improved plan.)

Dimensions: Width of seat to take 3 feet 6 in bows. Axles: ⅞, steel. Springs: front, 37 long, 3 plates, 1½ inches, 9 inches open: back, 38 long, 3 plates, 1½ inches, 9½ open. Hubs: 3¾ by 6. Bands: front, 2½; back, 3¼. Spokes: 15-16. Tire: ⅞ by 3-16. Wheels: 4 and 4 ft 2. Track: 5 feet.

Trimming: Brown corduroy and patent leather welts and facings. Back made up in small squares and the upper part finished very full, so as to project forward, well beyond the squares, forming a kind of plaited roll. Finish the edges of the back by sewing a welt to the edge of the enamelled duck with which you cover the back part, allowing it to be one-half inch larger than the buckram, to give room to sew the welt to it. Then blind sew to this welt, instead of sewing down, then binding with turn-over welt.

Painting: Body: black; belt: carmine; cleft: striped carmine and Bismark, forming the latest style of Japanese stripe.

BELGRAVIA.

Plate No. 36.—This design is original with our artist, and is gotten up *expressly* for the Journal, and we have no fears of its injuring the reputation the Journal has gained for producing the *best* display of practical illustrations ever given the public. This body can be built after the same plan given for No. 35; in fact, the time is coming when there will be few round corners made, other than with the bent panels.

Dimensions: Width of seat: 30 inches, to take 3 feet 7 inches bows. Hubs: 6 by 3½. Bands: front, 2⅜; back, 2⅞. Spokes: ⅞. Axles: ⅞, steel. Tire: ¾ by ⅛. Springs: Rouse & Co.'s new pattern, oil tempered and cast-steel, possess great elasticity, and are coming in demand by first-class builders. Wheels: 4 feet and 4 feet 2 inches. Track: 4 feet 10 inches.

Trimming: Morocco; cloth head lining, patent leather welts and facings. Use the "Grecian Bend" style of back, with two wrinkled rolls around it, and patent leather welt between. The cushion must not be squabbed or made in plated squares, because it will not match the rolls of the back, they being wrinkled. You must make the cushion in plain wrinkles, leaving more than usual fullness, and gathering it principally to the outer edges. Use the scalloped back valence, bound with turn-over welt, and tied up between the scallops with small pieces of rubbed down welt, clinched with 2½ ounce tacks to the valence—more fully explained on page 37, No. 2, of volume 3.

PAINTING: Panels, lake; border, black. Cross stripes: gold, forming diamond centre.

Correspondence.

☞ We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.

For the Coach-Makers' International Journal.

THREADS FROM THE MEMORY OF AN OLD CUSHION.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER VI.

CONCLUDED.

Soon the fire of the gun boats ceased, and they returned down the river, having doubtless accomplished all they wished, namely, to discover whether any Confederate troops were in that vicinity; but their departure was only for the time, for soon indeed they returned, escorting innumerable transports loaded with the soldiers of the Union, coming from every city, town and hamlet of the great, busy, prosperous West; loaded with the men who had left the plough in the furrow, and the tools on the bench; with men who had left home, friends, wife and children; loaded down with men who had sacrificed property and future prosperity; in short, with those who had left all they held dear, and had taken their lives in their hands, prepared to sacrifice even that, so they could save their beloved country from the perils and curse of disunion; they came animated by the purest sentiment that ever possessed a great people—*unselfish patriotism;* and even those they came to crush are amongst those to-day who are happy that their own madness was curbed and eradicated.

Soon my owner picked me up, put me on the caisson, and we went into camp with the infantry; the rest of the battery we did not know where they were, but in a few days an order came to report at Corinth. The M——s battery was broken up, the guns given to other and braver men, and the "*cannon boys*" were, with a few exceptions, disgracefully discharged. I continued with the caisson, and my big swearing owner was one of the continued. We soon heard there was to be a great battle, and that possibly the fate of the Confederate cause depended on it. And I also heard it was to be somewhere near the place at which the "*cannon boys*" got extinguished. Troops kept arriving now from all quarters, and every hour, and a motley crowd they were; some armed with the squirrel rifle of the hunter, or the shot gun; more even had long lances with forged heads on them, something like the weapon called by the Irish a "croppy pike;" but the mass was well armed and equipped. Constant drilling and inspections by well-trained officers soon made splendid soldiers of this naturally brave, impetuous people, who were always possessed of a very high opinion of their own invincibility, and a consequent small idea of the courage or fighting qualities of their Yankee enemy; and their enthusiasm was so well kept aglow that when they marched out to "wipe" the Yanks from the land of Dixie on the 6th of April, 1862, at Shiloh, or Pittsburg Landing, I doubt if ever an army went to battle with as certain a feeling of victory. It was to be mere fun. But never was an army so terribly disappointed when on the afternoon of the 7th of April, their shattered, routed, broken columns straggled back to Corinth to entrench themselves there. Never was an army dragged from the summit of apparent glory and victory to the lowest depth of despair and defeat. Months, nay, a year, did not eradicate the terrible memory of their defeat; and more I might say, that for the *whole* war that army never faced their enemy with anything like full or complete confidence.

I was in the warmest corner of that fearful fight of two days. I escaped unhurt and uninjured during the first day and that first night. What a fearful rain storm deluged us; it rained as if *the bottom had fallen out of everything overhead*. The soldiers said it was the firing brought down the rain. Any how it was fired down; I *never* saw it rain so before or since. We were at it by daylight of the 7th, and continued firing at short range until about 11 o'clock. Our men fought well, but I could see they had enough. Occasionally I could hear a remark, such as: "them yar ain't the fellows we was fightin' yesterday; I bet them's fresh yuns." "Boys, they're a lickin' of us; see them infantry of ourn is whipped, by gosh—yar is a fresh battery at us; we'll ketch it now." "Hell, we can't stand this much longer," said the captain as the new battery commenced to blaze away at us. Three of our guns were soon disabled; the enemy's infantry were cheering, and evidently saw we were nearly beaten. They charged at ours, and ours broke and ran. I heard the order "*limber to the rear;* away with you, boys, or that cavalry will get the guns." My big artillery man jumped on to me, and away galloped the horses, when something appeared to have struck us. A flash, a report like thunder, and I flew up in the air, A round shot had hit and exploded the caisson, killing my owner, and nearly all who were on it. As for me, Mr. Fred, it knocked the stuffing out of me—that explosion so shocked me, that every "*button*" in me flew out as if my strings were cut. My top and *bottom* were split as you see them, and I lay among dying and dead until I was soaked with their blood. You will notice the color of my inside even now. Don't be shocked, bless you; I was at first, but I got used to it.

After awhile came the ambulances of the Union soldiers, collecting the wounded, and taking them to a place of shelter from exposure One wounded man who lay partly across me was picked up to be put in the ambulance. As they lifted him, I was exposed—my front happened to be cleaner than the rest of me. The wagon was about to move off, when a voice I knew yelled out: "hould an, boys; be the mortshall gob af there is'nt wan of me young lady's cushions. Och, devil the lie; wurra, wurra. How did it iver get there? Sure it was blown into the river from that starn wheeler I tould ye about. Murther, I wandher af the poor kurnel is kilt too. Sure his poor wife was niver found, the Lord save us; 'tis hard to tell what'll become iv us. Sure I am now dhrivin' half kilt poor divils around in a wagon instead iv dhrivin' our poor young lady fur pleashure. An who knows how soon I'll be half kilt meself, an sum one wauld be dhrivin' me. Well, I'll take the '*ould cushin*' along any how, 't will keep me mind iv betther times."

Sure enough it was my old friend Tim who had found me, and, although tattered and torn, I felt satisfied to be with him; and I staid with him until we were sent home from the war—the ambulance sold to this boss by auction, and I chucked under the bench to rot, and be kicked out or swept out to-day by a red headed trimmer.

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 3.

BY J. H. T.

How to print the leaf of any tree or plant.—Rub the veins on the back side of any plant you desire with a piece of ivory to bruise them a little; then rub it over gently with a piece of woolen dipped slightly in linseed oil; then lay the oiled side of the leaf on a piece of white paper, and press it equally on every part, and a perfect impression of it will remain on the paper; which, if you please, you may color its natural color.

Another way of taking the impression of leaves.—Take any leaf, let it be thoroughly dry, and with a printer's ball, it being equally covered with printer's ink, strike it gently four or five times over the back of the leaf until all the veins have been blacked with the ink; then lay your leaf on a small board, with the back side upward; then lay over the leaf a piece of white paper, wetted a little, so as to be but a small matter more than moist, and upon this paper lay another smooth board, and press it down hard, but not so hard as to break the small fine fibres of the leaf, and this will give you a fine impression.

But this would be done more easily if you had a wooden roller made like a cylinder, about one foot in length, and one inch and a half in diameter; the middle part of which is covered to the length of seven or eight inches with woolen cloth rolled hard two or three times about it.

The white paper that covers the leaf being rolled four or five times backward and forward, with this roller, will give you a very curious impression. But if you cannot procure printer's ink, which is not easily to be had in the country, then you may use the following method:

Rub the back of the leaf with boiled linseed oil, and then strew some powder of black lead; or, if you have not that, charcoal dust very finely powdered and searced, or the powder of burnt cork very equally upon a smooth board that will just cover it; then stroke it over smoothly with a knife, and clap it upon the board, the back of the leaf having been oiled; and then lay your white paper on the blacked side of the leaf, and either press it or roll it as before.

But if you would print in colors, mix them to the consistency of printer's ink with boiled oil, using vermillion, chrome green, &c. Cover your printing balls with that, and dab them on the back of the leaf, and so take off your impression as before directed.

To preserve the leaves of tulips.—Make up some card paper into the form of dripping pans, and fix the tulip leaves to the cards with strong gum Arabic water; then pour on gently some isinglass, prepared in spirits; warm till the leaf is quite covered, and in the space of an hour or two the liquor will become hard, and all the colors will be preserved in beauty for several years if the flower be preserved from the air by a glass, &c. You may do the same by the leaves of the auriculas

☞ HAVE you seen Foulke's new wheel?

For the Coach-Makers' International Journal.

Setting Axles to bring Wheels on a Plumb Spoke by Measuring the Dish of the Wheel and Taper of the Box.

The plane of the dish to a wheel is an imaginary straight line drawn across the face of the wheel from one side to the other. A straight edge laid across represents that line, and, where it crosses on the hub, shows the point on the hub that lays in the plane. The straight vertical line A B (Fig. 1) is the plane to that dish, while the angling lines that go out to the left of A B, will represent the spokes as they are driven into the hub to form the dish.

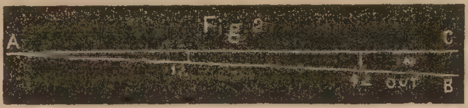
The horizontal line D E represents the axis of the box which should be placed in the hub so as to be at right angle or perpendicular to the plane of the wheel. Below the axis is the line H that represents the under part of the box to the wheel The taper to the box makes the line H angling towards the axis at the point of the axle arm.

An important item is obtained by this representation: that is, by leaning the wheel one way or the other towards its sides, all of these angles change exactly the same amount of their relative position from a vertical and a horizontal line. For instance, in this figure I have drawn the angle to the taper of the box and that of the dish to the wheel exactly alike. Therefore, if I want to bring the under half of the dish into a vertical line or, as it is called, "a plumb spoke," the top of the wheel has to lean over towards the face, so that the dotted plane C B leans on the same angle to the right of the vertical plane that the dish did to the left of said plane. This will change the position of the axis from D E to the dotted axis F G and the dotted line that represents the taper to the box will now be parallel to the horizontal axis D E. Before leaning the top of the wheel over to the right it will be noticed that the taper to the box H stood angling to D E the same as it now does to F G.

It is desirable to have the dish of the wheel and the taper of the box on the same angle, so that when the wheel is brought on a plumb spoke by the set of the axle that the under side of the box will be horizontal, thereby giving no more inclination for the lubricating oil to run out at one end than the other, *yet no sacrifice of the plumb position of the spoke should be made to gain that object.* If the angle to the taper of the box is greater than the angle to the dish of the wheel, the incline of the box will be towards the shoulder of the axle, and if the dish of the wheel has the greatest angle, the incline will be towards the point. Equal angles as we have seen in the diagram, produces no incline either way.

Now, it is self-evident that if we can calculate by geometrical rules the pitch that the axle box should have on its under side to bring the under side of the wheel plumb; the same pitch applied to the under side of the axle arm, will hold the wheel to its required position. We will do this by comparing the line H that represents the angle of the axle box with the line D E that represents the axis of the axle arm. We will suppose the distance from the outside of the hub to the outside of the wheel B is 24 inches, and that the length of the axle box is 12 inches. The dish of the wheel where the plane crosses the hub is 1 inch, and the difference in the diameter of the two ends of the axle box is 1 inch. This will make the angle to one side of the axle box depart from a straight line ½ inch in running 12 inches, and the angle to the dish of the wheel depart from the same line 1 inch in running 24. It will be seen by reference to Fig. 2, that the departure of the angle at 12, from a straight line, is one-half as much as it is at 24, because the former runs one-half the distance of the latter, therefore the angles are equal.

The scale Fig. 2 consists of a radial or straight line A B, drawn on the gauge stock that is graduated into inches, of which the 12 and 24 here marked represent that number. The words IN and OUT on each side of the radial line are to distinguish the sides of the radial line—the former signifying that the point of the axle pitches down on its under side, and the latter that it pitches upward The line A C represents a straight edge that is pivoted at A, so that it can be turned to any desired angle from the radial line. For the measure of Fig. 1, we would set the rule C A off from the radial line B A at 24 one inch on the side of the line marked "IN," which is the departure that the angle of the spoke makes from the plane of the wheel where it crosses the hub. Next, we would measure or space with the dividers from the edge of the straight edge back toward the side of the radial line that is marked "OUT" at 12 one-half inch, which would reach precisely to the radial line. Or an easier way would be to take the whole difference of the diameters in the two ends of the box, which would be 1 inch and double the length of the box, which would bring it on the radial line at 24, from which measure back toward the OUT side of the same one inch. As we have before observed, this would produce the same result, and would save dividing the difference of the diameters of the two ends of the box, which is a difficult thing with wrought-iron axles that have little taper.



After we have measured back to the radial line turn the rule up to the place last spaced and fasten it there by a thumb-screw and clamp provided for the purpose. This is simply comparing the angle of the box with the angle to the dish of the wheel, which we have found to be equal, therefore the line C A, Fig. 2, is turned on to the line B A, which indicates a horizontal line.

The Fig. 2, here marked, is for the right end of the axle, and is so marked on the gauge stock. Precisely the same scale, with the point A reversed, is placed on the left end of the gauge stock and marked "left." We will suppose the wheel on the left axle has a different dish, as is often the case, which we call, for example, half inch. The same process for comparing angles is gone through with, (Fig. 2,) on the left end. The line C A is moved off on the side of the radial line, marked IN, at 24 one-half of an inch, then it is spaced back toward the side of of the radial line, marked OUT, at 24 one inch, which is the whole difference in the diameters of the two ends of the axle box. The rule C A is turned down to this point and fastened there. This will show that the rule is moved over the radial line, at 24 one-half inch, or at 12 one-fourth of an inch, which shows that the under side of the axle arm on the left side has a pitch upward at the point, that rises ¼-inch to 12 inches horizontal measure.

Now, if we should wish to set the wheels in or out from a "plumb spoke," we have only to find half the diameter of the wheel, and after the gauge is set for a plumb spoke, as directed above, to move the rule C A at a place that is equal to one-half the diameter of the wheel, either toward the IN side or OUT side of the radial line, just as much as you want to set the tread of the wheel either in or out from a plumb spoke.

HENRY HARPER.

[TO BE CONTINUED.]

TO THE AFFLICTED.

[The following letter and advertisement explains itself. We publish, just as received, and hope Dr. S. will excuse us for not inserting his advertisement in our regular advertising columns. It is our rule to decline advertisements not connected with coach-making, especially when ordered to collect our bill C O. D. As a burlesque on the advertising done by quack doctors, and showing to what extent correspondents go, aside from the *sharp points* some may be able to see, it is very readable and amusing.—ED.]

AGUEVILLE, N. Y., May 13, '69.

MR. EDITUR:—I hev bin a readin' uv yur valible Journil fur a yeer or more. I tuk it bekase I hed hankerins after the ole trade, but will say I hev not worked at it fur five yeers cum next Sept.

I studed medesin and sergery, and hev now a perfession insted uv a traid tu foller. I thot as how yu mite be uv sum servis tu me, as I hev hearn thare are a good many "ingured" persuns amung the karage makers.

Now, if its me as says it, as shouldn't, yit I kin ashure yu that I hev graduated, and kin sho my diplomas writ in lattin, tide with nise ribben, and also kin cend yu prufes uv my skill. This mutch I kin say ferelusly. I kin s t a bone, sew up a gastly woond, remuve engraved karbunkles, ampertate, or remuve eny part except the hart, and save the life uv the "ingured" one.

I sumtimes take out shaller branes, and put in sheep or eny uther kind tu sute the pashent.

I am a firm beleever in mesmerism si-kology, si-kometry, clarevoyanse and magnitesm; hev studed under Tennesse Klaflin, and uthers uv her kind. I kin see as far into a millstun as eny clarevoyint. I hev examinen a flee with a mikroskope, and seen the frisky tadpoles in a drop uv water. But I didn't want tu say enything in my own prase.

As yur book is taken everyware, I wud like yu ter insert the follering, and send the bill C. O. D.

ALL HEELIN INSTITOOT, BYE

DR. STRABISMUS, M. D.

Dr. Strabismus wud respectferly kall the attenshun uv "ingured" karage makers tu the fercilities he offers tu ingured persuns. The lokation is a good one, and komands a splendiferous view uv the Erie kanal, and a "*blue mass*" uv hills in the distens. Good femail nursis are in attendens, who ware the blumer, and kin step as slyly in a sick rume as a kat on brussils karpit.

This Institoot is situated in Agueville, 150 miles west uv New York city, and 2000 miles east uv Sacramentoe. The medesins used are purly vegitable, and maid bye Dr. S. frum the dorg fennel, gimson, thissel, wild turnep, &c., wich grow in the naberhood.

No kalomel is used, and the tretement is Eclectico-Homoeopathic. Persuns who prefur the Allapathic kin be akomadated with the most naushes mixturs known tu the three kingdums.

Mentil aborashun kured bye a new yit sevear plan We abuze the pashent, thro up tu him his natevity, skoff at the traid he follered, and then invite him tu our armes. Uv coarse when the pashent finds we are frendly, he will cum down on his nees, and fele mutch better.

The pashent is sumwhat benefitted, and we git the muney.

Eny who are in a fightin' mood, and hev kalled on one Makduf tu help em, will be strapped down, and be treted to small doses uv katnip tea until thare nervs are quieted. Evry form uv disese uv boddy and mind will be kured or no pay asked.

Dr. Strabismus also hes the gift uv sekónd site, and kin tell yu the past, prezent and futir.

Plese send fur sirkeller, and adriss Dr. Strabismus, Agueville, N. Y. Yours, truly,

Dr. S., of New York.

For the Coach-Makers' International Journal.

Mr. Editor:—Victim's communication reminds us, as Lincoln would have said, of a little story. There was once a railroad celebration in their State, accompanied with a free dinner. A farmer present, anxious to secure as much as possible, since it cost nothing, ate so heartily that he died before reaching home.

We are afraid our friend Victim was too anxious to obtain all the benefit possible from the bosses' Journal. If it had been his own, he would have waited till he was sure he understood the article, and then tried it on a single hub. For after a successful experience of about twenty years making wheels that would roll as long as Uncle Sam has ground for them to roll on, why rush off and spoil eight sets on account of a few lines from a stranger. My dear fellow, like the rest of the victims, male and female, you were too rash. If my article has done you no other good, let it teach you not to be so ready to believe all that you hear and read. Let beginners try their new plans; keep on yourself in the good old way of your fathers. We are glad that you boil your pork, that will save your valuable life from trichniæ; boil your cucumbers, and you won't have the cholera. As soon as you read this article send off your three dollars for the Journal.

Graduate.

☞ Linden Iron and Steel Co. advertise in this Journal.

For the Coach-Makers' International Journal.

COLOR.

BY J. H. T.

Continued from page 120.

Colors, in painting, is a term applied both to the drugs, and the tints produced by those drugs, variously mixed and applied.

Painters reduce all the colors they use under these classes, dark and light colors.

Dark colors are black, and all others that are obscure and earthy, as umber, bistre, &c.

Under light colors are comprehended white, and all those that approach nearest it. Painters also distinguish colors into simple and mineral.

Under simple they rank all those which are extracted from vegetables, and which will not bear the fire; as the yellow, made of saffron, French berries, lacca, and other tinctures extracted from flowers, used by limners, illuminers, &c.

The mineral colors are those which are drawn from metals, &c., and that are able to bear the fire, used by enamellers.

Colors are also divided, by some, into changeable and permanent.

Changeable colors are such as depend on the situation of the objects with respect to the eye, as that of a pigeon's neck, taffetas, &c.; the first, however, being attentively viewed with a microscope, each fibre of the feathers appears to be composed of several little squares, alternately red and green, so that they are fixed colors. Kircher says, that the changeable colors observed in the wings of pigeons, peacocks, &c., arises from the feathers being transparent, and of a figure resembling a prism; and, conseqently, the lights being differently refracted from them. Permanent colors are not exhibited by refraction but by reflection.

Colors for water coloring.—*Ceruss.*—Grind it with glair of eggs, and it will make a very good white; it is too yellow for some purposes, coarse and gritty.

White lead.—Grind it with weak gum water, or water of gum lake, and let it stand for two or three days, and if it be afterwards mixed with roset or vermilion, it will make a fine carnation.

Spanish white.—Grind it with gum water; it is the best white of all to garnish with.

Lamp black makes a good black, being ground with gum water.

Vermilion, if it be ground with the glair of an egg and a little clarified honey, to make it bright perfect, is good; but native cinnabar is better, and of a more lively color.

Cinnabar lake makes a deep and beautiful red, or rather purple, almost like a red rose; grind it with gum lake and turnsole water; if you would have it light add a little ceruss, and it will make it a bright crimson; if it be to diaper, add only turnsole water.

Red lead.—Grind it with some saffron and a stiff gum water: the saffron will make it orient, and of a marigold color.

Turnsole.—Lay it in a saucer of vinegar, and set it over a chafing dish of coals: when it boils take it off, and wring it into a shell, adding a little gum arabic; let it stand till it is dissolved; this is good for shadowing carnation and all yellows.

Roset.—Grind it with Brazil water, and it will make a deep purple; put ceruss to it and it will be lighter; grind it with litmus and it will make a fair violet.

Spanish brown.—Grind it with Brazil water, mingle it with ceruss, and it will make a horseflesh color; it is not so brisk and lively as Indian red.

Bole armoniac makes but a faint color; the chief use of it is in making size for burnished gold.

Green bice is to be ordered as blue bice; when it is moist and not thoroughly dry, you may diaper upon it with the water of deep green.

Verdigris.—Grind it with juice of rue and a little weak gum water, and it will have a most pure green; if you would diaper with it, grind it with lye of rue, or the decoction thereof, and it will make a hoary green. Diaper upon verdigris, green with sap green. Verdigris, ground with white tartar and then tempered gum water, gives a most perfect green.

Verditer.—Grind with a weak gum arabic water; it is the faintest green that is, but is good to lay upon black in any kind of drapery.

Sap green.—Lay it in sharp vinegar all night; put into it a little alum to raise its color, and you have a good green to diaper upon other greens.

Orpiment.—Grind it stiff with heavy gum lake water; because it is the best color itself it will lie upon no green, for all greens, white and red lead and ceruss, stain it; wherefore, you must deepen your colors, so that the orpiment may be highest, and so it may agree with all colors.

Saffron.—Grind it in glair; it may be ground with vermilion.

Masticote.—Grind it with a small quantity of saffron in gum water, and never make it lighter than it is; it will do to lie upon all colors and metals.

Pink yellow.—If you would have it sad colored, grind it with saffron; if light, with ceruss; mix it with gum water.

Ochre de luce.—Grind it with pure water Brazil, and it will make an excellent hair color, and is a natural shadow for gold; Roman ochre is the most glowing ochre of all.

Umber is a sad color; grind it with gum water or gum lake, and lighten it, if you please, with a little ceruss and a blade of saffron; to cleanse it, burn it in a crucible, then grind it, and it will be good, and when you temper it use a drop or two of onion water, and it will preserve it from cracking.

Ultramarine.—If you would have it deep, grind it with litmus water; but if light, with fine ceruss and a little gum arabic water. In grinding ultramarine and other colors, be not too swift in your motion, but let it be gentle and slow, because the swiftness of the motion heats the stones, which will cause your colors to starve or lose somewhat of its lustre, especially, if it be a color of no great body, as pink, &c.

[TO BE CONTINUED.]

[SELECTED.]

"TO THE INJURED ONES."

THE GREAT SPEECH AT THE METROPOLIS.

Dearly beloved:—You may think it strange that I, *even I*, should stand up to champion your rights. I acknowledge that I was deceived in my estimate of your real worth. When I abused you, spit upon you, and reviled you, I thought the fires of my wrath would consume you, not leaving so much as a grain of ashes.

True! I did singe you smartly. Yes, I *think*, I burned you up, and now, figuratively speaking, I take your ashes and make lye (lie) of them.

You have been a paying card, and now as your last value is within my grasp, I shall make soap of you to mollify the past. Oh! I could rend these locks of mine, (hear! hear!) scratch my eyes out in a bramble bush, or raise the price of Egyptian cuts, or do anything else, if I could but show to you my sincerity, and how desperately I am working to use you to my own profit.

Please dont fail to send on your scraps, and I promise you that they shall always be placed, as heretofore, on the *first page* next to the back cover (hear! hear!) of my valuable monthly.

It does not matter whether you speak the truth or not, (hear! hear!) and right here passion almost strangles me; I allude to that serpent's head which I thought I had bruised, but I was deceived.

O! "What is that I see before me? It is a dagger!" No! it is that "sheet infernal." Come! let me clutch it—(hear! hear! hear!)—a thing miscalled a mo mo—month. Help! I sink! Take them off! I'm being strangled. (Great excitement from the X roads eastward, the injured ones revive the speaker by whispering, "Here is another acrostic.")

Excuse me, friends.(?) I was carried away by my feelings. But I am too much fatigued to continue. (Go on! go on!)

I have not strength sufficient to proceed; my throat is like a nutmeg grater, and the froth of my indignation has wilted my starched front. (Leaning over in an affectionate attitude the speaker feebly whispered:) Dont fail to supply me with your "rich developments."

(Here the speaker sank into a chair, and fanned himself with a fork.)

A motion having carried to publish the proceedings and speech in all the coach-makers' magazines of New York city, the meeting adjourned to a cellar, and encouraged each other *hover hay pot of hale.—Exchange.*

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For the Coach-Makers' International Journal.

SCRANTON, May 10th, 1869.

MR. EDITOR:—*I wish to ask a few questions* through your columns. How is gold leaf burnished; necessary tools; where can they be had? Where can I obtain printed or colored scrolls?

You may think this does not come under the head of carriage painting, but as Mr. P. Allette sometimes says, a painter is supposed to do miracles. I have got in a shop where gold leaf is as common as lead color. I am not a subscriber, but when I go in a shop to work, I ask the boss where his JOURNAL is. If he don't have it, I tell him that it is *an article he can order first, and I keep them.*

Varnishing seems to be the principal trouble with painters. I will give my mode for what it is worth; more for the benefit of the painters that work in the worst of all dirty shops, and they are plenty; and where there is a poor shop there is other faults, lumber not seasoned as it should be, &c. Painters can tell the faults best, for they are a fault-finding set. Get the body to a good surface with rubbing varnish. I use a little ivory black, ground very fine, to keep it jet. Now for the varnish room. Have it tight, so that no air can get through, for that will spoil it, for where there is air, there is specks of dust. Get it clean, and keep it so. Set your body so the light strikes it that you may see the little specks, and get your body perfectly clean. Off with the shirt, that is the easiest way to clean yourself. Next, have good brushes, not old worn out ones, as I have seen painters trying to do good work with. Have a clean cup; don't wipe off your brush in the same cup you use varnish out of—have two. I use Noble & Hoar's, and a treacherous article it is. Some prefer Harland's; I don't know anything about that. Lay on the varnish full; have it heavier at the top of the panel, so it can flow out clear. If any specks, some pick them out; I never could pick them out to much advantage. When done, darken the room; it will keep the flies away. Lock up the varnish room, and not allow much hammering near. If a boss don't leave the painter have all to say about the varnish room, he had better stop business. I have been one of the lucky ones. I watch the weather as much as anything. I never had a job to pit, although there is no telling what my next job may be. Varnish is treacherous; watch close is the motto. This is my first; you may hear more, lucky boy.

C. W.

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For the Coach-Makers' International Journal.

Optical Illusion, a Certain Delusion, and a very Just Conclusion.

OPTICAL ILLUSION.—If when you are sitting in a railroad car, your train not being in motion, another train should pass slowly by you, in looking at the moving train it appears as if the train you are on is moving off.

CERTAIN DELUSION.—When the other train has passed out of sight, you find that you are standing still on the track.

A VERY JUST CONCLUSION.—That people, with their eyes wide open, may conclude they are in motion while attempting to benefit a *certain class of mechanics*, whereas it is the *passing train* they are looking at, which soon gathers sufficient speed to be out of sight.

Just so! Now an individual may pay out a V for the styles from Egypt, and when he has his wareroom filled, wake up to the conclusion that he is in America, and that his rival down street, who saved two dollars in getting *his* patterns, is on the moving train, while *he* has been switched off on a side track; and more, he has been deluded, for as he rubs his eyes and looks around he finds he is on a coal train. He concludes, however, to stay aboard until he reaches the terminus, but instead of arriving at a city he learns, at the last moment, that the train has been backing towards the dark entrance of the mine.

He makes a leap and lands safely, yet not without some sore scratches, and ever after pays his way on the train which goes through direct from the Atlantic to the Pacific. This train is always on time, has the best *rolling stock*, and the most accommodating conductors. This is the road that VANDER-built.

Pencil, Rule & Square.

D. BOARD, EDITOR.

SCALE DRAFTING.

As announced in the last number, we commence a series of instructions on scale drafting. This being to the progressive body-maker, or learner, one of the most important subjects we could treat upon, we anticipate a goodly number of our readers will follow us monthly with a good deal of anxiety, and probably our remarks will be pretty thoroughly criticised.

While we feel satisfied that we fully understand the subject on which we are writing, we are aware of the difficulty before us of making it plain to our readers. Should we fail in any point, we would consider it a special favor to be informed at once, for our object is to give a clear and full illustration of the whole system from the beginning to the *end*, showing the kind of instruments necessary by cuts, with description, together with the kind of material required to make a perfect draft. To those acquainted with this art it will do no injury, while those who are anxious to acquire it will receive great benefit. The new beginner will find much to discourage them, but by constant practice and perseverence the object can be obtained.

Scale drafting is reducing a carriage, or any other object, to any given scale and retaining its proportions—half inch to the foot being generally used by coach draftsmen. As a general rule, most of the present style of carriages originate in the scale draft, and are then transferred to the blackboard to full size.

We are aware that we have undertaken a work that is not mere child's play, but hope and expect to be able to carry the reader as successfully through as we did the French Rule just closed, on which so many encomiums of praise were bestowed.

We, therefore, ask our readers to not condemn us before they give us a trial. It is for your benefit we are laboring, and we trust you will, those who desire to be informed on the subject, give us your careful attention.

We have divided the sets of drawing instruments into three classes, viz: brass, fine German silver, and extra fine Swiss. The brass instruments are intended for schools; the fine German silver and the extra fine Swiss instruments for practical carriage draftsman.

Without the aid of some drawing instrument, a student cannot obtain a thorough knowledge of geometry or trigonometry; but as very few who go over these branches in youth, ever make any practical use of them in after life, it is not necessary that the drawing instruments which are furnished to schools, should be any finer in finish and quality than is sufficient for a clear demonstration of the problems.

But with the practical carriage draftsman, his drawing instruments are next to his head and hands, and they must be of the best material, well and accurately finished. Being in constant use, and if they are not perfectly correct, the loss and delay occasioned by them, in one instance will be much greater than the cost of a good set of instruments, which can be used his lifetime.

The fine German silver drawing instruments meet the wants of the practical man. The extra fine Swiss drawing instruments are more nicely finished than the fine German silver; the metal of which they are made resembles more closely pure silver, they are more substantial in in construction and consequently more durable. As a general rule, draftsmen give the preference to extra fine Swiss drawing instruments.

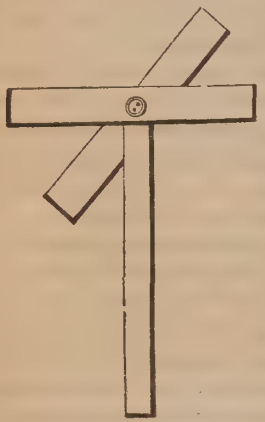
Having had considerable experience, not only in the use but in the purchase of instruments, we would recommend the house of James W. Queen & Co., 924 Chestnut street, and we feel assured any orders sent them will be properly filled with the kind specified. We do not recommend them as a matter of business merely, but from long acquaintance with them and their instruments we feel that too much cannot be said in their favor. Any who may so desire, we will take pleasure in personally selecting for them, and furnish at the regular list price.

Having made these general remarks we will now proceed to describe each of the instruments, required, their use and how to use them.

DRAWING BOARD.

Is a rectangular frame of walnut, with an open centre, into which a soft pine board, carefully planed and perfectly smooth, is fitted, and fastened in with buttons. The frame is made of hard wood, so as not to wear easily and become incorrect, and the centre of soft wood, so the fastening pins can be easily put in. The angles and edges of the frame should be as correct as possible, for resting the head of the T square against

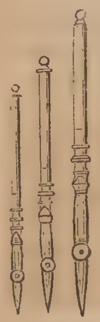
T SQUARE.



The T square is usually made of hard (pear) wood, having the head permanently and securely fastened at right angles to the blade, and a secondary head of the same size attached to it with a clamp-screw, and thus, when other angles than right angles are to be made, the moveable head can be fixed at the proper inclination to the blade, while a right angle is still maintained by the fixed head. The blade is attached between the two parts of the head, so that in using either the fixed or movable side, there is an edge to come against the drawing board, while the blade rests on the board.

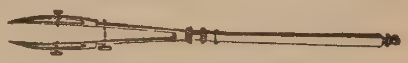
The T square is always used in connection with a drawing board, and with it all the straight and parallel lines of a drawing are very easily added—the head of the T square being held against the edge of the board, and, by sliding the head along the edge of the drawing board, parallel lines can be drawn. The edges of the blade of the T square are apt to get rough from constant use; to prevent this, and also to make the blade stiffer and less liable to warp, a thin strip of brass is set into the edges, and finished off smooth and true.

DRAWING PENS.



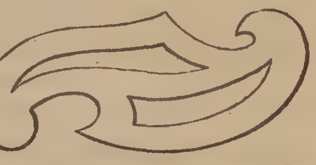
This is a most important instrument to every carriage draftsman, and should be well made and always kept in good order. It consists of two steel blades, attached to an ivory handle, and so bent that when the points are almost touching, there is a space between the blades for holding ink. One of the blades is hinged where it joins the handle, so that it can be opened away from the other blade when it is to be cleaned. A steel screw, having a German silver head, is passed through the hinged blade, and screws into the other blade; by turning this screw the points can be brought to the distance apart for making the required thickness of line. There are three sizes of these pens, viz: 4½ inches, 5½ inches, and 6½ inches long, from the point of the pen to the end of handle. To use the drawing pen, put the ink between the blades with a common writing pen, or a camel hair pencil, drawing it down and out between the points of the blades; screw the blades to the proper distance apart for making a line the required thickness. In drawing the line the pen should be held firmly against the ruler, or pattern, slightly inclined in the direction the line is being drawn; the points of both blades must touch the paper. The handles of most drawing pens are made to unscrew, and a needle is fitted in the screw end which can be used for pricking drawings from one paper to another.

RAILROAD DRAWING PEN.



For drawing close parallel lines, as mouldings, a double drawing pen is used. It consists of two drawing pens, attached parallel to each other on one handle; the distance of the two pens apart is regulated by the adjusting screw, between the end of the handle and the top of the pens.

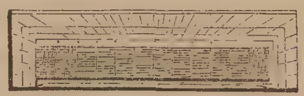
IRREGULAR CURVES



Are made of wood or horn. A variety of curves are cut upon the outer edges, and pieces are cut from the body in such a manner that there is a curve for every side of the opening.

These curves are much used in designing carriages.

RECTANGULAR PROTRACTOR.



This form of protractor is generally made of ivory, and is six inches long by one and three-quarters to two and a half inches wide; three edges of one side are divided in parts corresponding to the degrees and half degrees of the semi-circular protractor; the other edge has a division half way between the ends, which represents the centre of the circle and the point in which the lines around the three edges would all meet, if continued.

To understand the graduations around the edges, take a half circle protractor and bring its centre to the mark on the side not graduated, and make its straight edge correspond with that side; now it will be found that where the graduations on the edges of the two protractors come in contact they represent exactly the same number of degrees; and, if the other lines on the rectangular protractor were continued, they would meet the corresponding ones on the semi-circular protractor.

This protractor is used for the same purposes and in the same manner as the semi-circular protractor.

Wheel-Horse and Mallet.

SPOKE SHAVE, EDITOR.

In my former communications, I have referred to the setting of the axle. I requested Brother V. Ulcan to give us the correct principle of setting axles, and he has complied with the request and submitted his method. Friend Harper has done likewise, and it may appear as presumption on my part to submit what *I* think, from the fact that it is not of my branch of the business. I shall not attempt to gainsay what others have said. I shall not trouble the readers with *drawings* and *diagrams*, neither will I confuse the mind with questions in *geometry* and *trigonometry*; but I shall endeavor to show, from the wear of the wheel, what is the correct principle that should govern the setting of the axle, and in so doing I shall submit and claim the admissibility of the evidence as appears from the wear of the same; and I wish here to state distinctly, that whatever I may say shall be in the spirit becoming so grave or important a question, and with no intention of controversy.

Why is it that so many of our wheels run their dish out? or, in other words, dish back. Is it the fault of the wheeler? I say not, provided they are constructed upon the principle as laid before you. Is it the fault of the hooper? Methinks not. What, then, is the fault?

Times almost without number have I been called upon by my employers to give an account of this and other seeming defects in the wheels. Knowing and feeling I had done my duty, I was at a loss to discover what could produce such curious defects. What must I do? was the query within my own mind. I resolved to investigate the matter thoroughly. While resolving the subject in my mind, the cause presented itself. Simultaneously with this flash, I saw as it were the remedy for the defects. But first the cause.

My wheels are hooped with ¼-inch dish, and and it has not been in wear more than a month, and the one-quarter has run out, leaving the wheel as it was before it was hooped; the result is the paint all cracked and the spokes had the appearance of being loose in the hub.

Now, what has caused this wheel to be in this condition? Is it the fault of the wheeler or the axle-setter? Upon measurement, I find that the track is from 4½ to 5, and in many cases 5½ inches narrower than what it is across the top. You will bear in mind our wheel has one-quarter dish, and is standing off of a perpendicular line of 2½ inches, *at the* 5 *inches*. Now we plumb the ground spoke, *as per dish*, which throws in the height of the wheel half of an inch. This you see still leaves us 2 inches with the ground spoke plumb. Now, we will come down to half the height; with our wheel 4 feet, we find that our ground spoke is 1 inch off a plumb line. This brings us to the ground and tread of wheel. What is the state of things here? We find that all the burthen is resting on the edge of the tire or tread, the inside performing little or no actual service. The result is, the front edge of tire in running over the stony streets is stretched; or, in other words, it expands, consequently the front is more likely to wear than the back. This tire extending on the front causes the back of the tread to force the dish out.

Let us for one moment consider this one thing. We have a wheel that is of the following proportions: hub, 3½ in.; spoke, 1 inch; 4 feet 2 inches and 3 feet 11 inches high, with the ground spoke 1 inch out of a plumb line, with the additional weight of 300 pounds. All this weight, you see, is on the tenon of the spoke where the shoulder comes on the hub. Is it any wonder that the paint should crack, or the spoke work loose? Is it any wonder that our wheels dish back when this is carefully considered? All will agree with me that it is no longer to be wondered at. It is not only the wheel that is so curiously affected; the axle itself is a great sufferer from this want of a correct principle to govern the setting of the axle. My opinion is as follows: that the axle, from nib to nib, should be set as near a horizontal line as possible, if we should expect to get a light running carriage. Upon this point I agree with friend Harper and V. Ulcan, but it seems to me they have omitted one very important matter and that is, they have failed to consider the expansion on the track.

We will get the dish of our wheel one-quarter the height, 4 feet: the length of axle arm, or spindle, 6 inches; the spindle has from nib to collar one-eighth of an inch taper. We will bring our spindle on the bottom and front strictly on a horizontal line; that is to say, we throw our spindle to the front, and lower on bottom just the amount of the taper, which we suppose to be one-eighth of an inch, as above; our wheel is 4 feet, half being 2 feet, or 24 inches, which is four times the length of spindle. This being the case, we find that our wheel is thrown, as per half the height, ½-inch off of a perpendicular line, which is ¼-inch more than the dish; or, in other words, our ground spoke is ¼-inch off of a plumb line. What is to be done to bring this spoke plumb? I hold that the expansion on the track will, at least, accomplish this. Such appearing to be a fact, we find that our spindle on the bottom is thrown up, or off of a horizontal line, about the thirty-second part of an inch. This will not materially affect the easy wear of the spindle in the box, it will not interfere with the oil, it will lubricate freely.

If the above method be correct, I cannot see why every smith or axle setter, could not work a great change; in this simple version, I cannot see that there is any secret, or mystery, in the setting of the axle. As I have other matters, I must, for the present, leave the axle with friends Harper and V. Ulcan.

I see in No. 8 JOURNAL, page 121, a communication, headed "Victim of Misplaced Confidence." I sympathize with Victim, and hope that in future he will read the JOURNAL more carefully, or be milder in his raving at what I conceive to be his own want of better judgment. As to what "Graduate" said, I have nothing to be responsible for. Victim and Graduate must settle that matter between themselves, and I most respectfully ask that for the future Spoke Shave be excused from any and all classifications with others' opinions or sayings.

Victim cannot show, from any record, where I advanced the idea of boiling hubs five minutes; and I must confess my astonishment that an old war horse should work with a wheel horse for eighteen years, and gobble up such an idea as the one of boiling his hub for five minutes.

It rather looks to me as if Victim was his own *victimizer*, in his failure to exercise his better judgment. What I said, as appears in the February number, I still adhere to. I hold that it is impossible to put the spokes in the hub correctly without first steaming the hub, so that it will harmonize with the tenon on spoke. You must take into consideration that the mortice in the hub is surrounded by a solid body of solid wood, while the tenon on spoke is as a mere shadow in comparison. We will suppose the hub and spoke to be of the same quality or temperament. Would it be possible for this smaller body or shadow coming in contact with this larger, or more compact body, as is the case with the hub.

What is the case with the hub when it is dry? Does it give or yield to the demands of the spoke? Why, an inexperienced judgment would answer this question in the negative. If the spoke is fit to the mortice, as it should be, it would be next to an impossibility to get your shoulder down in the hub; the hub being so hard that the shoulder on spoke would be shattered by coming in contact with the face of hub. Whereas, if your hub is properly steamed, it becomes pliant, and readily yields to the demands of the shoulders on the spokes. The mortice alike gives to the dry and natural condition of your tenon; the spoke becomes the harder body, consequently, the mortice must give, and when the steam has left your hub, the same naturally dries (or more correctly speaking adheres) to the tenon.

As I have now more matter than I desired I shall refer to the above in my next. In No. 8 article, line 15, you have me to say "*tar* of axle," when it should read "*jar* of axle," &c.

☞ Springs, axles, carriage bolts, stump joints, &c., manufactured by the Linden Iron and Steel Manufacturing Co., Walpole, Mass.—Read advertisement.

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

HOOPING WHEELS.

After having the tire rolled out according to the size of the rim of a heavy coach wheel, we joint our tire, ¼-inch thick, so as to have it ¼-inch shorter than the circumference of the rim. This will, when cooled off, draw the shoulder and joint tight, and leave the dish unaltered. Before welding a tire, add three times the thickness of the same to the joint; upset, then rivet together and weld; measure again and see that your tire has ¼-inch less width than the rim. This rule for welding applies in the same way for a ⅛-inch tire intended for a buggy wheel; consequently, have it ⅜ths, or three times the thickness of tire longer than the joint, which is, in this instance, 1-16th of an inch plumb shorter than the rim. If the wheel is not dished, joint the tire 3 16ths of an inch shorter, which will draw the rim over ⅜ths of an inch, or the required dish. Should the tire draw less, take it off and draw out until, when sighted across your tire and a mark on your hub in conformity with a ⅜-inch dish, it ranges with said mark. Heavy wheels, with six or more short felloes, require a tire 1 inch shorter than the circumference of the rim to draw the joints and shoulder of spokes close.

SIZE OF WHEELS.

Here we give the proportions for four sets of coach wheels, for which our brother and co-laborer, Spoke Shave, will pardon us, as his department shows a blank in this respect. For the heaviest wheel, make hub 8¾ inches long; 6¾ inches diameter; 6 inches diameter at each extremity of hub; spokes, 1¾ inches wide by 1⅜ inches thick; tread, 1½ inches; height of rim, 1⅞ inches. A light coach wheel has a hub 7¼ inches long by 5¼ inches diameter; height of felloe, 1⅜ inches; tread, 1⅛ inches; spokes, 1⅜ inches. The rule to make three different sets of wheels, as commonly used, up to the first or heaviest set, is as follows: add ½-inch to the hub either way, ⅛-inch to the spoke, ⅛-inch to the rim, and ⅛-inch to the tread.

TOOLS.

Without paying any notice to the coarsest kind of a hammer, as sledge hammer and its use,

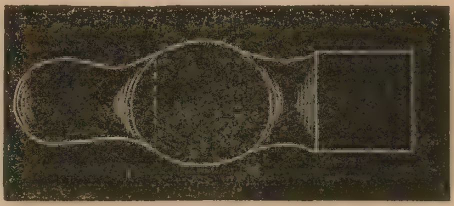


Fig. 1.

we will give two patterns for hand hammers—a swedge hammer and iron and a rivetting hammer. The hand hammer, Figs. 1 and 2, having a flat circular face and a globular pane, is a tool which a hand commonly owns, and a great deal of its effectiveness depends on the right proportion and size of that tool. The flat face is used for pounding, or stretching and finishing off the desired shape; the pane serves to forge out hollow places, tapering off collars, &c. The cavity for the reception of the handle is shown by dotted lines A. Some prefer to widen out at the top, and drive the wood out by wedging.

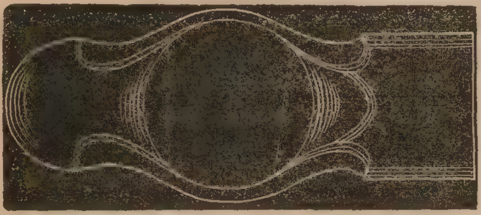


Fig. 2.

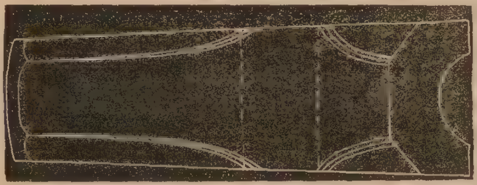


Fig. 3.

FIG. 3.—A swedge hammer for 1 inch finish.

FIG. 4.—Swedge iron, top view, corresponding with swedge hammer, Fig. 3, the moulds vary from ½-inch to 2 inches in width, and widen a trifle at either end of the concave mould. This prepares the piece to be swedged, to get true after passing the middle of the swedge block.

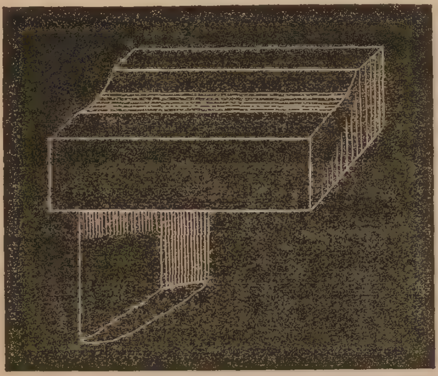


Fig. 4.

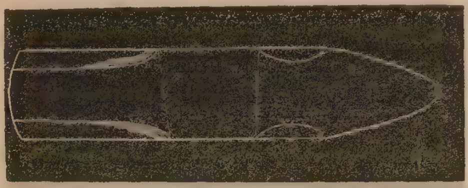


Fig. 5.

FIG. 5.—Riveting hammer, which only needs notice as to its proportion and shape.

All these illustrations are half size.

FIG. 6.—A new style of step for a dog-cart, or gentleman's phæton. It looks rather more stylish than a single stay step, and has the upper step far enough below the rocker, so as not to interfere with the panel, which generally gets bruised if in line with this step.

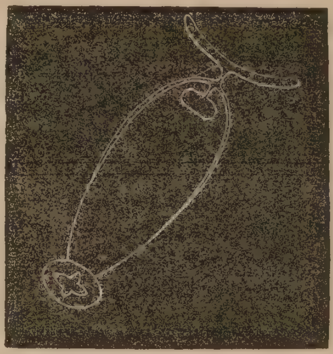


Fig. 7.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

THE ART OF COACH PAINTING.

(Continued from page 126.)

The finisher should have at least three varnish cups, four will not be too great a number. If the employer will not furnish them, then buy them yourself, and you will not lose anything by it; for it will be folly to attempt to get on a clean coat without a sufficient number of cups. One will be needed for clean varnish for the panels, one for the clean second-hand varnish which is generally used for the top, arch, rockers, and inside edges, and one for a wiping cup The fourth cup is required in case of any accident wherein it may be necessary to cleanse the brushes, or remove the varnish from a panel, or panels, when it is dirty, or where a run or a heavy flow has appeared.

It is a very good plan to have a set of varnish cups made with false bottoms filled with lead, which prevents them from being easily overturned and when, in the process of varnishing, it may be necessary to wipe out the brush while the left hand is in an awkward position relative to the work, or when it may be actually in use, it will be found very convenient The cup sitting firmly, the painter may wipe out the brush without using the left hand to steady it, (the cup.)

In the carriage varnish room, cups made in the manner described, will be found very handy and economical. In varnishing a carriage-part, the cup is not held in the hand so much as on body work, and the brush is wiped out more frequently while the cup sits on the stool.

Besides the cups named, the painter should provide himself with several small vessels for holding striping color, and the panel colors; which may be needed to touch up the panels during the progress of the painting.

PAINT MILLS.

There is no better *friend* to the painter than a good paint mill, and no greater cause of vexation than to be compelled to use an old worn-out one. It is a tedious operation, at best, to grind out a cup of paint by hand, and although the work generally falls on an apprentice, or some rough hand, still there is always dissatisfaction manifested when the paint mill is ordered up. There are three or four kinds of mills manufactured, Harris' patent being the most popular.

They vary in size and price, and, therefore, are suited to the wants of large or small factories. Where several painters are employed, there should be two paint mills; one kept exclusively for grinding colors, and another for lead, filling, pumice stone, &c. By this means, the colors are not so liable to be soiled by mixture with lead color, or other rough heavy paints, which clog the mill up so rapidly. For it is useless to attempt to keep a mill perfectly clean in the hurried season, where the different hands and boys grind out drop black, vermilion, green, lead color and filling, on the same day, and all in a hurry.

Scenes, like the following, are common in a shop where there is but one paint mill:

Jour.—Johnny, what have you got in that mill?

Johnny.—Dark lead color, sir, for my gearing

Jour.—Well, hurry up and run it through, and clean the mill out nicely; I want to grind some carmine.

Johnny hurries up, not in the grinding out of his dark lead but in the manner of cleaning the mill. The mill gets a wipe and a promise, and the jour gets in a passion, it may be, and soundly berates the "cub" for leaving the mill so dirty The apprentice replies very tartly, and for a short time, at least, there are unpleasant feelings on both sides.

The paint mill should be fastened solidly to the bench on which the "stone" rests, and near enough to it to allow of the paint being put in without being compelled to walk half-way across the shop.

A tin scoup *should be* found in every paint shop for conveying the color from the stone to the mill. With the scoup *all* of the paint can be taken from the stone, also the turpentine which the painter may use in cleaning it.

The mill should have a close cover, to be used while grinding out colors, &c, as a protection to the health of the painter. The mill, in motion, generates more or less heat, which, added to the odor from the mixed color, is sometimes sickening, and at all times offensive.

Where the mill is run by steam, the speed should not be much greater than when turned by hand. For, being *continually* in motion the mill soon gets *hot*, and heats up the color, causing it to become like *liver*, and we think prevents drop black, and probably other colors, from drying well.

The color also hardens in the grooves on the grinding surfaces, which prevents the color from running out; if turpentine is added it may destroy the body of the color. When the mill becomes hot so that the color will not drop, the belt should be thrown off until it (the mill) has cooled.

To avoid accidents, there should be a wrench made to fit the regulating screw, to obviate the necessity of placing the hand in a dangerous position. We have seen serious accidents from carelessness in this particular. One, in which a young man had his fingers crushed between the cogs, requiring a surgeon's attention. It was a loss of several weeks' time to the young man; the doctor's bill was very generously paid by his employer. The price of a suitable wrench, in this instance, was not less than $10.

THE PAINT STONE

Should be a marble slab, about two feet square, set in a wooden frame, and securely fastened to the bench, at the left of the mill. It should have a cover to protect it from dirt, and from being daubbed up by having paint and varnish cups set on it. A well-kept "stone" is an unusual sight among carriage painters; not because there are not those in every shop who are tidy and would like to have everything in order, but men grow weary of cleaning up after the slovenly ones, and, in time, add their share to the dirty appearance.

In a well regulated shop there will always be found a man whose business it is to attend to the grinding of paint, and the work connected therewith. It is folly to depend on apprentices, and, in a large shop, we do not think it is right to demand of a boy the labor which is severe even on a stout man. There is always work enough about a paint room to keep a hand busy, should he not be employed at the paint mill. He may sweep the rooms, attend to fires, (in winter,) put on priming coats on wheels and gearing, clean off grease, sandpaper, &c.

Putty should not be mixed on the stone used for colors. There should be a *putty* stone kept for the purpose. The palette knife, mill duster, oil, turpentine, japan, leather shavings, &c., should have a place near the mill and stone.

WATER BUCKETS.

Of these, there should be a good supply. Those used in the varnish rooms should be kept free from grease by having a wash place, or buckets kept expressly for washing in. It is a very filthy practice to use oil on the hands, then catch up the soap and wash in a bucket used for washing off bodies, or gearings, preparatory to varnishing. Those who are so thoughtless, generally *wipe* their hands and face on the chamois, thus filling up the measure of their filthiness.

The shop that furnishes but, say one water bucket to two or three hands, may get along after a fashion, but will, during the year, loose the price of a cart load of them, by the hands waiting on each other.

SPONGES.

These should be selected with care, and as they are in such constant use by the painter, it is economical to buy those of a good quality. They differ somewhat in color and size—the "cup-sponge" being the smallest and finest, the larger sizes being "of globular, conical and cylindrical forms," and varying in softness and strength. Those of a pale yellowish tint we have found the most serviceable.

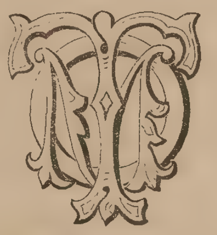
The dirty brown sponge, which is of a reddish cast inside, is generally rotten. Buy those which will be of a convenient size without cutting, or that will need to be cut only in two.

The body sponges should not be used on the carriage-part, and *vice versa*. It is a filthy practice to wash the face, neck, or person, with the sponges designed for the surface work, as they become greasy, and may be the means of ruining a piece of work.

The sponge is a very curious and interesting animal or vegetable, *we* do not pretend to know which, as that question seems to be in dispute. It is found far down in ocean depths, clinging to the rock and shells, and is gathered in the Mediterranean and in the West Indies. Under a powerful microscope, the sponge presents a singular appearance, and it is affirmed that it is actually pinned together by metallic pins, with heads and points similar to those used at the toilet. These microscopic pins are set at every conceivable angle, thus securely holding the parts together.

Sponge has lately been brought into competition with feathers, curled hair, &c., as an article for stuffing beds, pillows and carriage cushions, and, so far as tested, it has given good satisfaction.

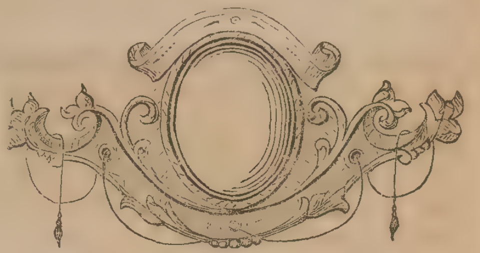
(TO BE CONTINUED.)

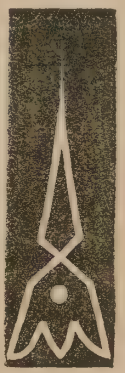


MONOGRAM.—This monogram, O M T, was drawn on an oblong, 1 inch by 1½ inches. If the ground color of the panels is claret, or English purple lake, the letters may be painted with the same color lightened up with vermilion and white, forming three distinct tints. On brown, coat the letters with lighter shades of brown, and so with other colors.

ORNAMENT.—This pattern is best suited to panels which are wide in proportion to the depth. Will look well on a light wagon, sleigh, or other gaily painted piece of work.

The oval form is used in drawing this ornament. Lay in all gold, or gold and color, as may suit the taste. Having secured the outline, distinctly marked on the panel, size in the pattern, without reference to details, which should be brought out after the gold is laid. Let the shades be well blended down, and the lights clear and sharp. The lights on fine leafing should be put on with a quick, confident stroke of the pencil.





STBIPE FOR SPOKE FACE.—It is simple, easily put on, and makes a genteel finish. A fine line may be run on the edges, starting at the base of the upper division, and continuing up the centre of spoke. Put on with gold or bronze. On a black or dark colored gearing which has not been striped with too gay a color, it will attract the eye. Gold and bronze should, to have their full effect and brilliancy, be laid on dark ground colors, and not be confused by placing other light-colored stripes near by, on the same piece of work.

W. W. B., WEST RANDOLPH, VT.—*Ques.* 1*st Ans.*—Keep your brushes in English varnish. Provide yourself with a covered tin can, made expressly for the purpose.

Suspend the brushes by the handles, so that the points will be one or two inches from the bottom of the can. Keep the bristles or hair covered to prevent the varnish from collecting along on them, which is the cause of a great deal of dirty work.

Raw linseed oil added to the English varnish, in the proportion of one-third oil to the quantity of varnish required to cover the bristles or hair, will be found to work well, as it prevents the varnish from "skinning" over.

Color brushes may be kept in either water or turpentine. Bristle brushes are generally kept in water. The camel hair blenders work better by being kept in turpentine, but as it is more expensive than water, the majority of shops use the latter. Water will answer the purpose, but it seems to weaken the hair and make it lifeless.

Ques. 2*d Ans.*—We always rub down every coat of varnish with pumice stone and water, before applying another coat, except on very cheap work, which has not been "rough stuffed."

If we paint and varnish on a lead surface, which has only been sand-papered, we hair off the first coat of varnish; then, when we wash the job preparatory to putting on the next coat, dip the sponge into ground pumice, taking up only sufficient to deaden the surface all over equally. This careful rubbing will prevent specks from showing on the surface.

If another coat of rubbing varnish is put on before finishing, it will bear a pretty good rubbing with pumice.

Answer to "Subscriber," May Number, Question Second.—Malori-green is a color resembling chrome-green. It has a good body, covers well, and when mixed with white in different proportions, forms a variety of pleasing hues. It is used clear as a ground-work for verdigris or emerald green.

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

As the season is now fairly open I have been carefully watching for "something new" in our branch, but while the work is very carefully finished, and is generally artistically well done, yet I find very little, if any change, from last year's styles, with the exception that in one of the principal establishments they are again introducing the "diamond" style for heavy work linings; the diamonds for the back being made very large, say 7½ inches by 5 inches, and this both for leather and all other materials.

In light work there is no new material introduced or new style to note—standard blue cloth being the favorite. I saw a six-seated phæton to-day, the body of which was trimmed with a mottled brown corduroy, and with brown cloth head linings, patent leather welts and raisings, which looked very well, and, I should say, would make a good durable trimming.

THE THREE (3) BOW PHÆTON TOP

Is used on some of those English style of phætons, and is peculiar enough in its construction to warrant a description. It being, in reality, a mere shelter top, used only in case of rain or a hot sun, very little attention is paid to making "the trimmer's pride," a smooth top. In fact, it would be impossible to do so, for there is no stuffing used, and the bows are so very far apart that it could not be done.

The top is made the full size of a phæton top, say from 3 feet 10 inches to 4 feet, from back to front. *There is no back curtain*, simply a plain piece of leather across the full width of back bow and bound, and combed, to the side quarter; the bindings of the comb to be continued across and over the top of back bow; the head lining welted up the back corners; straight joints, and sometimes only one long joint from back seat prop to front bow prop. It certainly does make the most homely looking affair that can be imagined, yet it must be said that it has the advantage of folding down flat, and of screening those who ride from sun or rain, and this is, perhaps, *all* that is looked for. While I offer it for your notice it is only because it is our duty, as faithful chroniclers, to note all that passes in "our way," judging that what may not interest one person may be of great importance to another.

THE PLAIN TOP CUSHION, MADE ON A WOODEN BOX OR FRAME,

Is used in one of our leading shops; it looks and *is* light, and is used only for light road wagons. A box, or frame, is fitted closely to the seat, grooves being cut for the all irons, &c., the front being reduced to nearly nothing, so as to form something the shape of a driving cushion; then stretch webbing across the top, muslin on that; then (light) hair cover the sides and back of frame; then nail a welt on the top edge and blind sew in the top, plain, smooth and no fullness; then turn the thing over, shove in moss, and cover up with enameled cloth, and use two (2) cushion straps.

HOW TO CLEAN DRAB CLOTH LININGS.

Put one (1) pound of pearl ash in a pailful of hot water, then with a brush wash the lining all over; rub well with the brush after the lining is well wetted. Next put three ounces (3) ounces of oil of vitriol in a half pailful of cold water. Taste it; if it bites, reduce it with water until it tastes a little sour; wash the cloth with vitriol water while it is wet with the pearl ash water. The cost will be: for one (1) pound pearl ash, 20 cents; three (3) ounces oil vitriol, 7 cents.

A. H. T., La Pierre, Mich.—In reply to yours, asking if T. Acks knows of any way to color, or dye, the head lining in tops without taking them out, I beg leave to reply that I have never done it, but I think it may, or can, be done by washing with "Howe & Stevens' Liquid Dye Colors," sold at No. 260 Broadway, Boston, directions in each package; or by making a coloring matter yourself with the following materials:

Sulphate of iron, (copperas,) 4 ounces, costs 3 cents; sulphuric acid, (oil of vitriol,) 3½ fluid drachms, costs 4 cents; nitric acid, 1 ounce, cost 5 cents; Prussian blue, 6 ounces, costs 70 cents.

Directions.—Dissolve the sulphate of iron, (copperas,) in one (1) pint of water, then add the sulphuric acid; heat the solution to boiling, then add the nitric acid in small quantities; continue the boiling sometime; next dissolve the Prussian blue separate in two pints of water; let the former solution cool, and then add the blue—apply it with a sponge or brush. It may be better to test the color first on a small piece of cloth to try its strength. Should you wish, you can make one-half of the above quantity.

THOMAS' TOP HOLDER.

We feel it due to the craft to say that this is the most complete invention for the purpose designed we have ever seen, and costing but little. Every shop should have a supply, thus avoiding the necessity for weakening the bows by nails; and then it is always ready and easily adjusted. The proprietors have left a sample at the office of the Journal, where it can be seen, or orders can be sent, and the machine will be shipped promptly.

Poetry.

For the Coach-Makers' International Journal.

THE HAPPIEST LAND.

BY C. KOEHLER.

A Yankee frigate gently rocked
Upon the calm blue sea,
Fair France upon her weather bow,
And England broad alee.
The men had ceased their toil, and now
The rule was play and fun;
But, here and there, a thoughtful few
Were grouped about a gun.

They spoke of famine, storm and wreck,
The dangers they had passed;
Aye, one was present when the lot
For human flesh was cast.
They spoke of battles on the deep,
Their peaceful homes on land;
But, as they warmed, each claimed in turn
The greatest fatherland.

A youth exclaimed, with flashing eyes,
And pointed to the west—
Where, in a flood of crimson light,
The sun just sank to rest:
"*I'll* tell you where the greatest land
In all this wide world lies—
'Tis there, where o'er the brave and free
The starry banner flies!"

"Not so; tis false!" cried sturdy John,
"There's none as free or brave
As where, upon her island throne,
Britannia rules the wave."
A Prussian said: "on Waterloo
We've conquered side by side;
But, just as war and voting yours,
Is knowledge our delight."

"Do not compare your polling votes
To freedom of the mind,
If but the spirit soars on high,
The dust may stay behind."
His native land, spoke Paddy, then,
And wiped away a tear,
"The spirit-broken slave e'en loves,
And holds forever dear."

Be calm! be calm! my *darling* isle,
All in the deep blue sea:
As every dog will have his day,
There 'll be a day for thee.
"Hoot, mon! be ye're lands full thrice as fair
Or free as ancient Rome,"
A Scotchman cried, "I claim the crown
For thee, my Highland home!"

But, as he spoke, the *Chaplain* stood
Amidst the wondering men;
He raised to Heaven up his hand
And spoke—"deny who can
That I am right, when for that land
The greatest love *I* cherish,
For yours, and yours, must pass away,
But mine will never perish."

For the Coach-Makers' International Journal.

GENIUS.

BY L. H. T.

On Thought's swift wing bright Genius sprung,
And to the breeze her banner flung;
Then, from the night-wind's riven shroud
She caught the lightning's livid flash,
And wrote, with quick, impulsive dash,
Her name in flame upon the cloud!

Then, as a wand'ring minstrel, stole
To wrap in melody a soul
All crushed and trodden down by care:
And like bright rippled wavelets played
About the soul, till storms were stayed,
And earth and heaven smiled bright and fair.

Youth's Department.

For the Coach-Makers' International Journal.

A NOBLE REVENGE.

BY DABBS, JR.

Ten or twelve boys, of various ages, ranging from ten to sixteen years, were playing together on the large playground attached to the school that they attended.

They were having, as they expressed it, a jolly time, when one of the larger boys burst out with "Now, that wasn't fair, Jim, and you know it."

"Yes, it was," said Jim, and all on *his* side echoed it, while their antagonists persisted that it was not.

The game stopped instantaneously, and in place of the happy looks and bright faces of five minutes before, nothing was seen but frowns.

Two of the largest boys, James Lewis and Bill Brigdon, undertook to settle the question beyond all doubt, by fighting it out.

The boys immediately, as in such cases, took sides with their favorites, and they all proceeded to a woods, about half a mile away, to "have it out."

Arriving there they stripped off all superfluous clothing, and at it they went; they fought for over twenty minutes, and succeeded in blacking each other's eyes, when, being parted by the other boys, the fight ceased, though without discovering who was in the right.

It is to be supposed that Jim was in the right, for he came out victor; and as for Bill, poor Bill, he bathed his face in in the cool water of a brook near at hand, and then went home to meditate revenge.

Revenge! ah, Bill, you are wrong there; many a one have you pummeled, and sent home in *mourning*, for you are a good fighter, Bill, and you were fairly whipped by Jim, and—but enough of moralizing.

Two or three months passed rapidly by, bringing winter, and with it skating. During all this time, Bill and Jim had not spoken a word together, though their mutual friends had repeatedly coaxed them to "make up."

One rather cold but pleasant day, the boys were skating along the creek, up and down, backward and forward; and among them, Jim and Bill.

At a place called "the dam," where the water was fifteen or twenty feet deep, some men were cutting the ice, and Jim was gliding round and round this broad opening of cold water. Bill was not in sight, having doubtless gone up the creek farther. Jim undertook to skate blind, and after a little manœuvering, he managed to skate into the open space, and sank into the water. He soon reappeared, however, and struggled frantically to gain the ice, but in vain. The boys kept aloof, and were afraid to approach the edge of the ice. Just then Bill came gliding round the bend of the creek, and his quick eyes took in the state of affairs at a glance.

All knew Bill Brigdon and his dauntless spirit, so they called to *him* to save *Jim*.

Now was Bill's time of *revenge*. Did he take it? We shall see.

Taking but one hasty glance at his former enemy, he skated direct to the spot where the men had left their ice hooks, &c., and seizing the one with the longest handle, he skated as near as he dare to Jim, caught the hook in the scarf around Jim's neck, and hauled him on to the ice. The other boys now laying hold, they got him on a sleigh, and run him to his home, where Bill helped him to dry himself and change his clothes. As soon as that needful task was accomplished, Jim said: "Bill, will you forgive me?" "What for?" said Bill. "Why for whip—(he was going to say 'whipping you')—for picking a fight with you." "Oh! that's forgiven long ago—let's be friends hereafter."

My story is nearly done; suffice it to say that they were firm friends ever after, and Bill always declares that 'twas the noblest revenge he ever had.

Remedies and Receipts.

To Keep Clear of Bed Bugs.—Take the white of four eggs and ten cents worth of quicksilver; put them into a bowl and beat to a perfect froth. Take a feather and dip into the preparation, and apply to every part of your bedstead where bugs conceal themselves; do this once a year, and you will never see a bed bug in your house. This plan is cheaper, if not better, than drawing their teeth.

Gooseberry Fool.—Stew, mash and make very sweet with brown sugar, some gooseberries, have ready a nice boiled custard. When both are cold, mix together and flavor to taste.

Strawberry Short Cake.—Make a cake of these proportions: Half cup butter to one quart flour and milk to roll, half teaspoon soda, and one teaspoon cream tartar. Bake thin, split and spread with butter and fresh berries.

Plain Steamed Pudding.—One quart buttermilk, one heaped teaspoon soda, a little salt, and flour to make a stiff batter. Steam an hour and a half. Liquid sauce.

Vanilla Extract.—Cut into inch pieces four good size vanilla beans and one tonqua bean; put them in a bottle and add half a pint of good alcohol. Let this stand in a warm place for three weeks; at the end of that time, pour off the extract carefully into a clean bottle.

Tapioca Pudding—Very Nice.—Three tablespoonfuls of tapioca soaked in cold water till it is swelled enough, then add one quart of milk, and put in a double kettle, or in a pitcher, and set into boiling water, and when the tapioca is sufficiently tender, add the yolks of three eggs, a small tea cup of sugar and a little salt; stir this into the boiling milk, season with vanilla, then pour half in a dish, add the whites of the eggs, beaten to a froth, then pour the remainder on the top. You can make it in the morning, as it is to be eaten cold, and is very nice.

To Stop the Flow of Blood.—The following mode of stopping the flow of blood should be remembered by every one. Housekeepers, mechanics, and others handling knives, tools and other small instruments, frequently receive severe cuts, from which blood flows profusely, and often endangers life itself. Blood may be made to cease to flow as follows: Take the fine dust of tea and bind it close to the wound, at all times accessible and easy to be obtained. After the blood has ceased to flow, laudanum may be advantageously applied to the wound. Due regard to these instructions would save agitation of mind, and running for a surgeon who probably would make no better prescription if he was present.

Good Soup.—Get what is called a good beef soup bone, boil two hours, leaving two quarts of broth; break two eggs into some flour and knead it very stiff; roll out in three sheets to the thickness of wrapping paper; spread them on the table to dry for half an hour; then place them on one another and roll them out as you would jelly cake; with a sharp knife cut very fine strips from the end, not wider than the thickness of a case knife; shake them up to separate them; drop into your broth slowly, stirring your soup all the while. Boil ten minutes; season with pepper, salt, celery, or a little parsley.

Sally Lunn.—One quart flour, piece of butter size of an egg, three tablespoons sugar, two eggs, two teacups milk, two teaspoons cream tartar, one teaspoon soda, a little salt. Stir cream tartar, salt and sugar into the flour. Add the eggs without beating, the butter melted, and one cup of milk. Dissolve the soda in the other cup of milk, and stir altogether. Bake in three pans, the size of a breakfast plate, fifteen or twenty minutes.

Many persons are in the habit of sleeping for half an hour or an hour immediately after dinner. This is a bad practice. Ten minutes' sleep before dinner is worth more than an hour after. It rests and refreshes and prepares the system for vigorous digestion. If sleep is taken after dinner it should be in the sitting posture, as the horizontal position is unfavorable to healthful digestion. Let those who need rest and sleep during the day take it before dinner instead of after, and they will soon find that they will feel better, and that their digestion will be improved thereby.

Scraps of Humor.

The following rules are posted up in a New Jersey school house: "No kissing the girls in school hours; no lickin' the master during holidays."

A preacher, discoursing about Daniel in the lion's den, said, "An' thar he sot, all night long, lookin' at the show for nothin', an' it didn't cost him a cent."

Mr. Rose married Miss Violet at Winterset, Iowa, last week. There is a flower bed for you. That Rose may reasonably expect to be a Poppy—in time.

An Irishman, on being told to grease a wagon, returned in an hour afterwards and said, "I've greased every part of the wagon but them sticks the wheels hang on."

In a Trial for Assault and Battery.—Counsel—"I will now introduce an eye-witness of the affair, Jas. C. Stokes." Judge—"What is your occupation, sir?" Witness—"Blind beggar!"

Subjects for conundrums being nearly exhausted, one desperate joker has gone back to our first parents, and inquires—"Why wasn't Eve afraid of the measles?" "Because she'd Adam."

"I never shot a bird in my life," said a friend to an Irishman, who replied: "I never shot anything in the shape of a bird, but a squirrel, which I killed with a stone, and it fell into the river and was drowned."

A man hearing of a other who was one hundred years old, said contemptuously: "Pshaw, what a fuss about nothing. Why, if my grandfather was alive, he would be one hundred and fifty years old."

A couple of fellows, who were pretty thoroughly soaked with bad whisky, got into the gutter. After floundering about for a few minutes, one of them said, "Jim, let's go to another house, this hotel leaks.

An intelligent gentleman from Germany, on his first visit to an American church, had a contribution box with a hole in the top presented to him, and whispered to the collector, "I don't got mein bapers, unt can't vote."

A young lady at Troy while engaged in conversation with a gentleman a few days since, spoke of having resided in St. Louis. "Was St. Louis your native place?" inquired the gentleman. "Well, yes—*part of the time*," responded the lady.

Where is money first mentioned in the Bible? Where the dove brought the green back to Noah.

An Irishman was employed to trim some fruit trees. He went in the morning, and on returning at noon was asked if he had completed his work. "No," was the reply, "but I have cut them all down, and am going to trim them in the afternoon."

"Mother, have I any children?" asked an urchin of eight summers. "Why, no; what put that in your head, boy?" "Because I read in a book to-day about children's children" "Here, Biddy, the child is feverish; wash him in ice water, and put him to bed."

A young minister, whose reputation for veracity was not very good, once ventured to differ with an old doctor of divinity as to the efficacy of the use of the rod. "Why," said he, "the only time my father ever whipped me it was for telling the truth." "Well," retorted the doctor, "it cured of it, did'nt it?"

"Who made the world?" asked a teacher of a little boy who had not been long at school. The boy shook his head and said nothing. The teacher threatened to whip him unless he answered. The boy feeling impelled to a confession of some sort, broke forth, "Well, master, I made it; but I promise never to do it again."

A young fellow was taking a sleigh ride with a pretty girl, when he met a minister who was somewhat celebrated for tying matrimonial knots on short notice. He stopped him and asked hurriedly:

"Can you tie a knot for me?"

"Yes, guess so," said Brother B. "When do you want it done?"

"Well, right away," was the reply.

"Is it lawful, though, here in the highway?"

"Oh, yes, this is as good a place as any—safe as the church itself."

"Well, then, I want a knot tied in my horse's tail to keep it out of the snow," said the wag, as he drove rapidly off, fearing lest the minister, in his wrath, should fall from grace.

Miscellaneous.

A flag made entirely of silk grown and manufactured in California is to be raised over the capitol of that State.

English magistrates are unable to determine whether velocipedes are liable to toll.

A yellow silk handkerchief make of spider's webs has been exhibited at a fair in Bermuda.

Horace Greeley says that the darkest day in any man's earthly career is that wherein he fancies that there is some easier way of gaining a dollar than by squarely earning it.

A new method for seasoning green wood in a very short time consists in holding it for some hours in water, and leaving it then to cool, by which the soluble substances are removed. It is then boiled in an enormous solution of borax, by which the insoluble albumen of the wood is rendered soluble and escapes from the pores. The wood is then placed in drying chambers heated by steam, and allowed to remain three days. Wood thus treated is more compact than it would be by ten years of ordinary exposure, it does not shrink or warp, and is secure against decay; on account of its great density it is more easily polished, and better fitted for articles of furniture and musical instruments.

There is a man in Chicago who possesses so remarkable a memory that he is employed by the various benevolent societies of that city to "remember the poor."

It is said that fish may be kept alive for ten days or more without water, by filling their mouths with crumbs of bread saturated with brandy, and pouring a little brandy in their stomachs, after which, in this torpid state, they may be packed in straw. They become alive in a few hours when again placed in fresh water.

Princess Metternich has painted all her carriages green.

Bishop Ames, of the Methodist church, declared in a conference held at Alexandria, Va., that tobacco was doing more harm to the church than whisky.

A firm of English coach builders advertises that it has imported wheels from America, and is now prepared to build light carriages on our models.

A Novel Invention.—A spring wagon has been invented by a gentleman in Maysville, Ky., which he proposes to run without any kind of animal or steam power. He has already perfected a small model, which runs up or down hill very rapidly. The power it received from an immense coiled steel spring, which will run for half an hour without being wound up. In going up hill the spring exhausts itself, but in going down hill it winds itself up. The inventor claims that he can carry very heavy loads over any ordinary road.

About thirty months ago, an inventor in New York, while seeking some means of making barrel staves impervious to petroleum, accidentally used a piece of marble to wedge the barrel he was experimenting upon into its place in the vat containing the solution with which he was trying to fill the pores of the wood. On taking out the marble, he noticed that it was beautifully stained, but threw it aside without further thought. About a month later, he picked it up, examined it, tried to wash it clean, failed, broke it with a hammer stroke, and lo! the color had permeated the whole mass. The discovery has been pursued until it is now claimed that six hundred different hues can be permanently imparted to marble.

Periodicals.

The "Workshop" is now in its second volume. No. 1 is before us, and is replete with magnificent engravings of jewelry, architecture, &c. The book is a translation of a German work called "*Die Gewerbehalle*," and which is also published in French and Italian. See their advertisement in back of Journal.

"Oliver Optic" and the "Little Corporal" come to our sanctum regularly, from which they are carried by the juveniles, who say they can" be beat, and, by the way they read the magazines, we believe them.

"Packard's Monthly," for June, contains a comic description of the Boston Peace Jubilee, illustrated. Terms, $1.00 per year. S. S. Packard, 937 Broadway, N. Y.

"Zell's Popular Encyclopædia" is, without doubt, one of our most valuable exchanges. No. 20 is before us, and is equal to the preceding numbers. *Everybody* should send for a copy; and we feel assured if they see one, they will want the rest. Price, 10 cents per copy. T. Elwood Zell, Nos. 17 and 19 South Sixth street, Philadelphia.

The "Phrenological Journal," for June, contains portraits and biographical sketches of several eminent persons, the Planchette Mystery, &c. Terms, $3.00 per year. S. R. Wells, 389 Broadway, N. Y.

The "Ladies' Friend" and "Peterson's National," for June, are up to the usual standard. The fashion plates are neat and pretty, with very entertaining literature. Tell your wives to subscribe.

The "Galaxy," for this month, is on our desk. It has two engravings, is neatly printed, and is a book that should be at everyone's fireside.

The "Ohio Farmer" is a weekly agricultural magazine, published at Cleveland, Ohio, by Messrs. Harris & Blakelee. Terms, $2.00 per year.

"Scientific American"—Munn & Co., 37 Park Row, N. Y.—"American Artizan"—Brown, Coombs & Co, 188 Broadway, N. Y.—"Mechanic and Inventor"—Thos. S. Sprague, Detroit, Mich.—Are all three devoted to scientific news. The last named paper has started but a short time, but we notice the last number came to us with a new face. The other two are so well known that it would be useless to comment.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

Wanted—A situation, under instructions, at Carriage Wood-work. Address J. G. Marple, Spring Garden, Penna.

Wanted.—By a Body-Maker, who understands his business, and is a good draftsman, a position as superintendent of a carriage manufactory. The best of references given. Address C. B. Darson, Newark, N. J.

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Persons desiring to act as Agents for the JOURNAL, will be required to satisfy us of their responsibility and integrity. *Those published as Agents are authorized to receipt for subscriptions so long as their names are continued on this list.*

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Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY
SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, May 20, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 35 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr., 15c.; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 35 per cent. discount from list. Clip King bolts, per dozen. Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1; 1 inch, $1.30.

Buckram, per yard, 16 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, $1.10 toper dozen, japanned and silver, 1.50.

Damask, German cotton, double width, per piece 30 yds., $16.50; do., Union, $30 to $33; English worsted, from $1.50 to $2 per yard; Rattinet, 60c. to 75c. per yard.

Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 50c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 33c.; 6-4, 50c.; drilling, 5-4, 46c.; 48 inch, 48c.; 6-4; 62c.; duck, 5-4, 65c.; 50 inch, 70c.; 6-4, 80c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 60c.; 48 inch, 62c.; flock drill, 48 inch, $1.00; do., muslin, 85c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 55 cents.

Felloe plates, wrought, per lb., 16c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.75; New York pat., ⅝, $1.25; ¾, $1.37.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 15c., do., No. 2, 12c.; railing and collar, 25c. to 28c.; enameled top, No. 1, 26c. to 28c.; do., No. 2, 24c.; enam. trimming, 25c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting machine, each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head, 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $9.50; do., Bright, $11.25; No. 2, plain black, $8.75; do., Bright, $10.50; New York, pattern black, $11.75; do., Bright, $13.75; Baltimore pattern black, $12.50; Bright, $14.50; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $2.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.65; ⅞, $1.80; 1 inch, $1.95. 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $2 05; ⅞ $2.20; 1 inch, $2 35; 1⅛, $2.50; 1¼, 2.65.
" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.75; 1⅜, $4.25; 1½, $4.75.
" ball, 1¼ inch, $4.50; 1⅜, $5; 1½, $5.50.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $8; 5 bows, $10.50.

Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $12
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.
" Bright tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.
" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., japanned, 56c.; with plated nuts and rivets, $1.20; Thomas' wrought japan'd, 70c.; with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼, 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb., No. 16, 55c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 1C, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.25 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.
" white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in. diameter, $2 to $2.25 per set,

Poles, hickory, per dozen, rough, $12; finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage; patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermilions—English pale, $1.50; deep, $1.40; Ger. goth. pale, $1.50; deep, $1.50; Chinese, $1.60; Trieste, $1.25; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 15c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome, L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 65c.; linseed oil, $1.18; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.

BRUSHES.

Paint—0, 65c.; 00, 75c.; 000, 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

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SPECIAL NOTICE.

Expiration Notices to subscribers of the Journal will hereafter be given by a blue X on wrapper, or cover, next the name. Should any mistakes occur please notify us at once. Our rule is to discontinue unless informed to the contrary.

PUNCTUALITY.

Few people, comparatively, place a proper estimate on the importance of always being punctual. The scholar who is never punctual with his lessons, and is always late at school, is not the boy who becomes a smart man. He fails to be on time when he makes an engagement with his comrades, and acquires the habit of being behind time, and it follows him through life; he reaches the depot five minutes after the cars have gone—the bank closed a few minutes too soon for him, and his note is protested and credit injured, and his business suffers in a thousand ways on account of the habit formed of putting off what can be done *now*. Business men in looking for assistants make great account of promptness and punctuality, and with many, the mere fact of their being true to their engagements and always on hand at the proper time, has been the stepping stone to their advancement. Did our young men but place a proper estimate on the importance of being punctual, it would enable them to go through life successful and cover up many other deficiencies. With coach-makers this has become a serious evil, failing to keep their promises with customers, neglecting to meet their engagements with their creditors, and, in fact, with some employers, everything they do is left until there is no putting off any longer. The customer is promised his job sooner than it is possible to get it done, or, in case sufficient time is taken, it is allowed to get behind, thinking that a few weeks will make no difference; and how often do we hear the expression that "a coach-maker or a shoemaker must have a week or ten days' grace," and in many instances on a job that will require but few days to execute it. Many seem to think they get along just as well by being two or three weeks behind their promises.

Our experience and observation is, that one of the most important considerations in successfully conducting any business, is punctuality in all business transactions. Better lose a job, than promise it at a time you know it is impossible to perform it. It may affect you awhile, if not fully established, but let a person once get a reputation for fulfilling his promises, and, if all other things are equal, customers will come for miles, and he will gain ten customers where he would lose one by refusing jobs that he knew he could not get done by the given time. If a man is known to be prompt, others will be more punctual with him, while advantage will be taken of the man that fails to keep his word, and he will often be disappointed in collecting his bills.

This indifference to keeping their promises (on the part of country coach-makers especially,) is not only working to their injury with their customers, but with their creditors; it has become one of their greatest drawbacks.

They send to the city for a bill of goods, payable at a given time—thirty days probably. Their credit not being good where they have heretofore dealt, they send to a new house, and give as reference some friend who knows them to be worth property, but is not aware of their lack of punctuality; or, perchance, the dealer consults the *Commercial Reports* and finds them rated fair. The goods are shipped, and at the expiration of the time agreed upon, the bill is sent, but no attention is paid to it, and in course of time another statement, with a request to give it his attention. He becomes out of humor because the dealer insists on payment, and complains of his being in a hurry, when he is worth several thousand dollars. The friend who recommended him is seen, and probably a letter is written by him, and after several months have elapsed the money comes; but the coach-maker, by not being punctual, has lost his credit and the influence of his friend. Prompt business men do not desire the custom of any man, however much he may be worth, if it requires time and trouble to collect.

How much better would it be for each to consider his ability, and, as advised heretofore, keep his promise sacred.

A word to those who have failed to be punctual with us. Occupying the position we do, we are often called upon to test the punctuality of coach-makers in different sections of the country, and many instances occur of misplaced confidence, resulting in pecuniary loss; and, if we should avail ourselves of the opportunity before us to give those who have abused our confidence a free advertisement in the Journal, we think it would be doing good service to the craft generally, for when a man will request a stranger to procure an article for him, to save the expense of coming himself—promising to remit immediately on receipt—and then so devoid of honor as to never even show any desire to settle, we think his name should be heralded from one end of the country to the other. We have refrained from taking this course thus far, but with some all other means have failed, and "forbearance has ceased to be a virtue." We shall, however, defer it for the present, for it is not pleasant to expose the failings and procrastinations of our brother coach-makers. Were they only isolated cases, we would bear it, but the amount is sufficient to make us feel, in duty to our family, bound to adopt some remedy. We hope, therefore, that those who have failed to be punctual will take warning, and remove the cause of complaint.

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☞ Edward Smith & Co., claims to have the best varnishes in the market. Coach-makers ought to know it. See enlarged advertisement.

a lighter appearance to the carriage. Particular attention has been given to coupling as short as possible, and about six inches have been saved in comparing it with others of this class now on the street.

To make the back quarter to shift, run the drip moulding across the quarter, dowel at the top, under the drip, and fasten the bottom with two box-locks, with dove-tail between them, to keep in place; the curtain to be made on a frame to fit the same space, making a pleasant summer carriage. This job is intended for glass quarter front, and can be shifted in like manner.

For a carriage of this kind it is advisable to have the best stock, and one of the greatest improvements is the *brass door lock* manufactured by C. Kunzig, of this city, thereby avoiding all danger of rusting and working stiff.

For particulars in regard to building body, see cant and explanations in "Pencil, Rule and Square" department of this number.

Mounting.—Gold. New style drop handle, improved diamond cross-strap buckle. Hub face-plates and pole-crab plated. The "victory" pattern of lamp. Moldings: $\frac{1}{2}$ inch deep, chamfered.

Dimensions.—Hubs: 7 inches long, $4\frac{7}{8}$ diameter. Bands: front, $3\frac{1}{2}$; back, $4\frac{1}{8}$. Spokes: $1\frac{3}{8}$. Tire: $1\frac{1}{8}$ by 5-16, steel. Springs: 39 long, 5 plates, $1\frac{3}{4}$. Wheels: 3 feet 4 and 4 feet 2. Track: 5 feet.

Trimming.—Brown cloth, "made up" in squares; covered buttons, patent leather welts and facings; back pillar holders raised, and bound with patent leather; front seat trimmed with leather; ivory trimmings.

Painting.—Panels: dark green. Striping on panel, inside of molding, carmine, making the stripe an eighth of an inch, monogram on door. carriage: paint same color; stripe, double line carmine one-eighth broad.

CONTINENTAL BUGGY.

Plate No. 38.—The principal points in this design were taken from a sketch furnished us by Mr. Weller, of New York, and for taste and originality will be found very acceptable. At the earnest solicitation of Mr. V., who saw this and other jobs in the warerooms of friend W., he sent us two of his latest and most fashionable buggies, for which we feel greatly indebted, and trust they will be highly appreciated by our patrons.

The panels are finished with a moulding running up on either side of arch, and the centre striped, carrying the same curve of the arch and angle of mouldings.

Dimensions.—Same as given for "Belgravia" buggy, in last number, plate No. 36. Track: 4 feet 8 inches.

Painting.—Panels: lake; filling in mouldings, carmine; stripe, fine line gold or carmine. Carriage: bright carmine; stripe: eighth inch black line, and two fine lines gold, away from black stripe.

Trimming.—Standard blue body cloth; back made in squares. For full directions see answer to P. B., in Trimming Department. Cushion to be made with squab top in squares, at the split leather (on which the front facing is made) only $1\frac{5}{8}$ inches wide. For directions for fall and facings, see trimming of Neapolitan Phæton, plate No. 39. The dash should be bound all around with patent leather.

NEAPOLITAN PHÆTON.

Plate No. 39.—This class of carriage continues to be very popular, and many are the different points that go to make the whole. The principal features of this design over others heretofore given are the round boot under the front seat, and the low side panel, together with the rakish appearance of the job generally, We have applied the pattern of step given in last number by V. Ulcan, and believe it quite an improvement over the usual style.

The round in front is produced by 2-inch poplar, glued together until it reaches the proper height, when it is cleaned off, and canvased with heavy linen. Width of body, for 3 feet 8 bows.

Dimensions.—Hubs: $6\frac{1}{2}$ by $4\frac{3}{8}$. Spokes: $1\frac{1}{8}$ by 3-16. Rim: $1\frac{1}{4}$. Bands: front, $3\frac{1}{8}$; back, $3\frac{5}{8}$, Tire: 1 by $\frac{1}{4}$ steel. Axles: $1\frac{1}{4}$. Springs: front, 37 long, 10 in. open, 5 plates $1\frac{1}{2}$ in.; back, 37 long, 4 plates $9\frac{1}{2}$ open, $1\frac{1}{2}$. Axles: arched $1\frac{1}{2}$ to 2 in. Wheels: 3 feet 5 and 4 feet 2. Track: 5 feet.

Painting.—Body: panels and seats dark brown. Seat skirts: striped fine line gold. Carriage: same as body, with broad line black, centered with gold, edged fine line light brown.

Trimming.—Body to be trimmed with maroon morocco, the head lining of brown cloth. The back to be made in wrinkles; the cushions to be made with wrinkled tops, very full patent leather welts.

How to make the back.—Lay it off as for one with a single row of squares and rolls; but, in laying off the leather, allow only $\frac{3}{8}$ of an inch fullness between the buttons; allow 1 inch for the squares up and down, and $1\frac{3}{8}$ inches for the belly, and 5 inches for the finishing roll on top of the back; hammer down all the creases, tuft and stuff very light; use covered buttons; the facings and falls to have two rows of $\frac{1}{4}$ inch (square cut) raisers pasted on, 1 inch apart; then paste on the leather; when dry, lay a rubbed down patent leather welt between the raisers and stitch both edges of it, and the outside of the raisers; bind them with turn-over welt of patent leather.

MARSHALL JENNY LIND.

Plate No. 40.—In some sections of the country there is no vehicle so popular as the Jenny Lind, and, to a great extent, they will still be found in the larger cities. In our opinion, a nicely proportioned carriage of this kind looks well any where, and we believe there are a great many more of them being built than for the last few years past. The design we present this month. if properly made and finished, will equal any on the street. The design for cleft in the side represents a half heart. Width of body top of seat frame, 35 in. inside of panels. Seat flare, $3\frac{1}{2}$ in. each side; roof rail swelled the same, to allow the iron centre pillar to stand perpendicular. Boot paneled on top.

Dimensions.—Hubs: 6 by $3\frac{1}{2}$. Bands: front, $2\frac{3}{8}$; back, $2\frac{7}{8}$. Spokes: $\frac{7}{8}$. Axles: $\frac{7}{8}$ steel. Tire: $3\frac{1}{4}$ by $\frac{1}{8}$. Springs: front, 37 long, 3 plates $1\frac{1}{2}$ in., 9 in. open; back, 38 long, 3 plates $1\frac{1}{2}$, $9\frac{1}{2}$ open. Wheels: 3 feet 10 and 4 feet 2. Track: 5 feet.

For country or rough roads, dimensions proportionably heavier.

Painting.—Body: maroon color stripe; mouldings fine line red. Carriage: lake, with eighth inch gold stripe, two fine lines red away from gold.

Trimming.—Same as Kearney buggy, plate No. 35, last number.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

For the Coach-Makers' International Journal.

SETTING AXLES.

Circleville, Ohio, June, 1869.

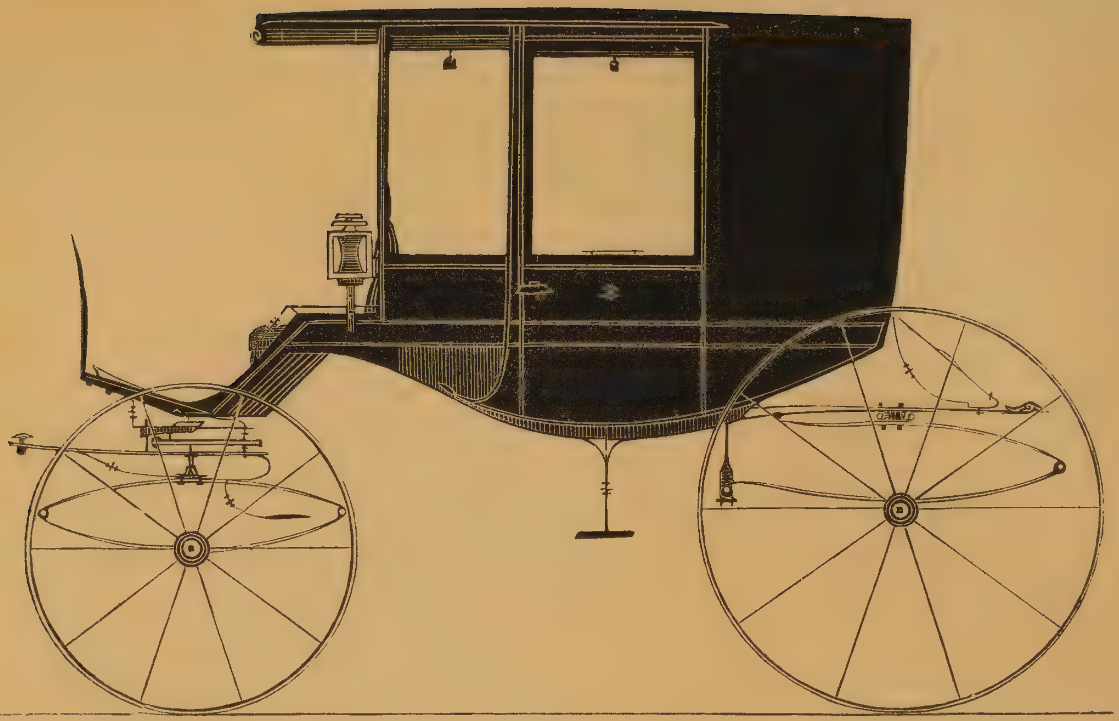
Mr. Editor:—In the April number of your Journal, I notice an article from Mr. Henry Harper, of Butler, Ill., on the subject of "setting axles;" and in the June number we are treated to another article, from the same source, explaining the geometrical construction, which explanation I fully appreciate, as I have for years applied the same geometrical principle in my business as a wagon maker, (though in a different way,) and have found it very correct and convenient, in the setting of all kinds of axles. I fully concur with Mr. Harper in the beauty and importance of geometrical construction in setting axles, but I cannot agree with him in the paramount importance he attaches to the "plumb spoke" theory, without knowing the *why*, and the *wherefore* of the *philosophy* of such construction.

When I commenced reading his first article, I expected to find the *philosophy* of "axle setting" fully demonstrated, but as I proceeded I found that he took the *philosophy* for granted, for he says: "because the philosophy of such construction (plumb spoke) is so apparent that their wagons would not sell without that reputation."

Further on he says, "I have measured hundreds of carriage wheels manufactured East, and have never found *an instance* where the geometrical proportion that should exist between the *dish*, the *top* and tread of the wheel existed."

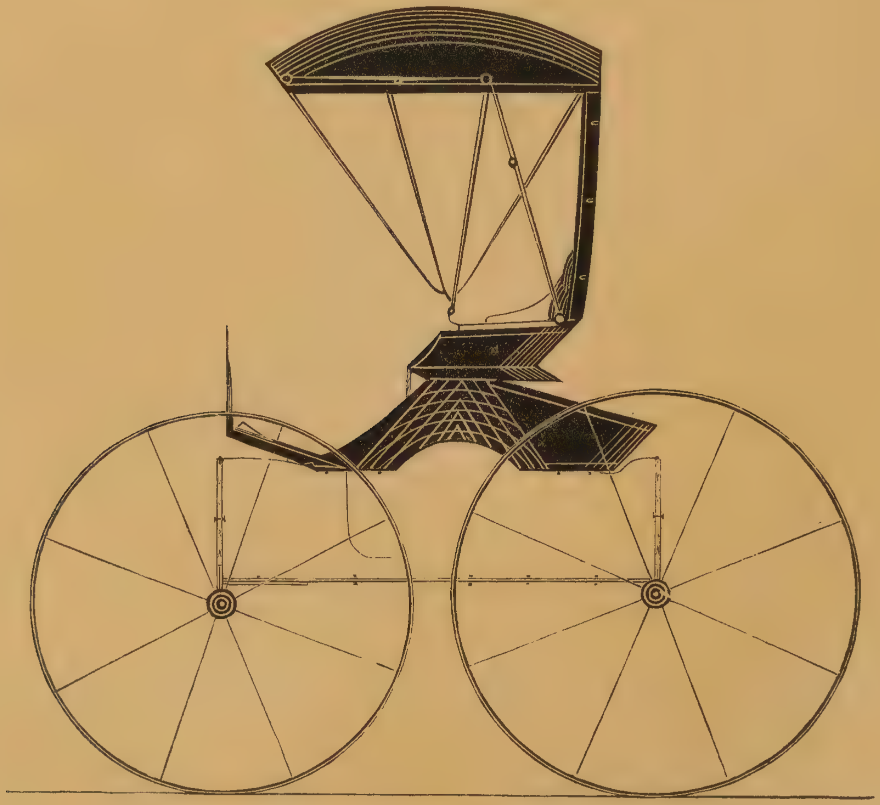
His theory then is, that the proper proportion between the *dish*, the *top* and *tread* of the wheel should *always* bring the under spoke *plumb*, and that "no sacrifice of this principle" should be made under any circumstances.

But what does Mr. Harper's application of geometry amount to? simply that we can get the *pitch* of the axle arm, so as to have the wheel stand in a certain position, but it does not prove



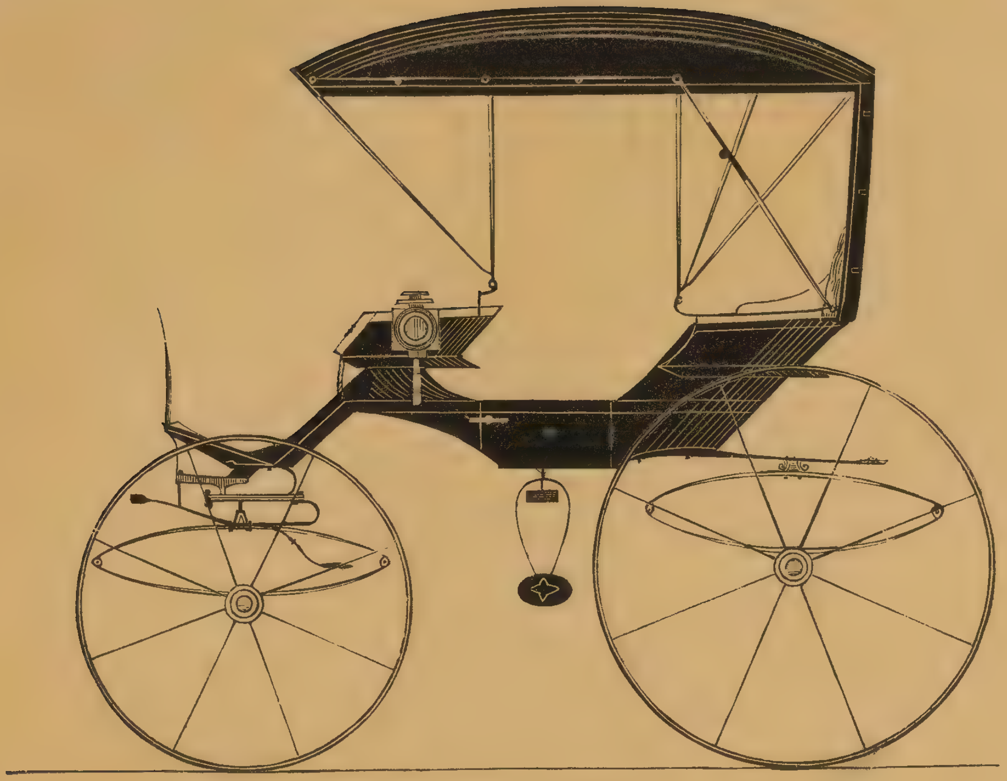
SIX SEAT COUPÉ ROCKAWAY.

Plate No. 37.—Half-Inch Scale. Explanation on Page 149



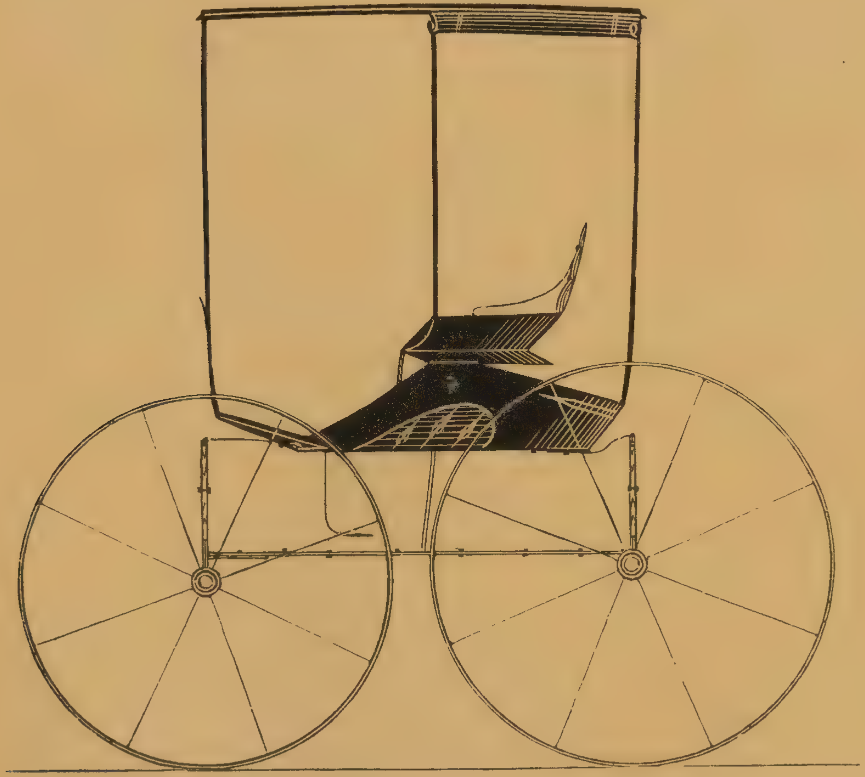
CONTINENTAL BUGGY.

Plate No. 38.—Half-Inch Scale. Explanation on Page 149.



NEAPOLITAN PHÆTON.

Plate No. 39.—Half-Inch Scale. Explanation on Page 150.



MARSHALL JENNY LIND.

Plate No. 40.—Half-Inch Scale. Explanation on Page 150.

this position to be *right*, any more than it proves it to be wrong; for, from the same principle in geometry, a rule can be deduced for setting the axle, so that the wheel will stand in any other position desired, and the rule will be of general application.

I have an axle gauge that I constructed some years ago, to save working out each question by figures, by which I can determine just the pitch my axle arm should have to make the wheels stand just so much wider at the *top* than tread, or to tell just how long my axle stock should be made to bring the spoke "plumb;" but I do not claim that I have discovered any great principle *in geometry*, by which I can give the axle arm just such a *pitch* as to cause it to have the least possible friction; neither have I taken anything as "apparent" or self-evident, but have been governed by observation and experience, and have formed my rule accordingly.

Now, as we cannot agree with Mr. Harper, we will give a few of the reasons *why*, hoping he will set us right if we are wrong; and, as discussion is invited, we claim your indulgence, Mr. Editor, promising to be as brief as possible.

I have had an experience of twenty-five years in wagon making, and have never known any one to axletree on the "plumb spoke" theory, although I have heard it advocated.

But let us take a portion of the proposition mentioned by Mr. Harper, the 5 feet wheel, $\frac{5}{8}$ of an inch dish, &c., as given, and we have $\frac{3}{4}$ of an inch dish to the centre of the wheel, and, if both wheels were the same, we would have the pair of wheels 3 inches wider at top than bottom. But if the wheels should have only $\frac{1}{4}$ of an inch dish, then they would only have 1 inch swing, or 1 inch wider at top than bottom.

In either case the *swing* is less than I have ever known for wheels of this height; and in the case of the $\frac{1}{4}$ inch dish, (which some claim to be right,) the axle arm would have to pitch *up* over $\frac{1}{2}$ an inch for our ordinary thimble skein boxes; a pitch that I do not think admissible under *any* circumstances.

But for the sake of argument we will suppose the "plumb spoke" theory to be correct, and that we have wheels with $\frac{1}{2}$ an inch dish, what will Mr. Harper do when the tire comes to be reset, and the dish becomes $\frac{3}{4}$ or 1 inch? I suppose such a wagon would be utterly worthless, until new axles were made for it.

But my experience does not teach me that the draught increases with the increase of dish after the axle is made or set. Again, suppose the face edge of the spokes in one set of wheels are 5 inches, and in another set $5\frac{1}{2}$ inches from the point end of the hub, (hub 12 inches long,) why should the "plumb spoke" theory be followed alike in both cases, when we *know* that the pressure of the box on the spindle will not be equally distributed in the two cases, with the *pitch* of the axle arms the same? Mr. Harper may say that all hubs of the same length should be morticed alike, (or he may say it is immaterial,) but all hub manufacturers *do not* follow one general rule, and we would like to know at what point on the hub the front or breast line of the mortice must be to bear a proper relation to the plumb spoke. But if the "plumb spoke" theory is correct, why not plumb the spoke by the *centre* instead of the *face* edge? This would really be setting the axle on the "plumb spoke" theory, and would, in most cases, give the wheels (according to my experience) much nearer the proper swing than Mr. Harper's method.

Let us suppose again that we have carriage wheels with $\frac{1}{4}$ of an inch dish, then the back spokes (if $\frac{1}{2}$ an inch back) will have $\frac{3}{4}$ of an inch dish; and to plumb the front spokes, the wheels would have only 1 inch swing, while in the other case the swing would be 3 inches. Then the question would naturally arise, why adopt the rule of taking the front instead of the back spokes, or *why* take either?

Mr. Harper's theory would set all wheels, having the same dish, to the same difference between the top and tread. For example, a wheel 3 feet high would have the same difference between the top and tread as a wheel 5 feet high; but in order to do this, the axle-arms must be made with *unequal* pitch. To illustrate, we will take the 5 feet and the 3 feet wheels, each with $\frac{3}{4}$ of an inch dish at the centre of the hub. We will also take the 4 inch by $3\frac{1}{4}$ inch boxes, &c., as mentioned by Mr. Harper. Then in the 5 feet wheel the spoke has 3-10 of an inch dish to each foot from the outside of the rim to the centre of the hub; and consequently (without going into details of figures) the axle arm has 3-40 of an inch *upward* pitch. But the 3 feet wheel instead of having only 3-10 of an inch dish to the foot, has $\frac{1}{2}$ of an inch dish, and consequently the axle-arm must have $\frac{1}{8}$ of an inch *downward* pitch to bring the spoke plumb. Then taking the horizontal line as our guide, the difference in pitch between the two axle-arms must be 1-40 $\times \frac{1}{8} =$ 1-5 of an inch, or *almost* $\frac{1}{4}$ of an inch.

Now, why make this difference in the axle-arms, *for wheels of the same dish*, simply to make the lower side of the wheels stand "plumb." Mr. Harper says this question is "*pre-eminently* abstruse," and I fully agree with him, if he means the *philosophy* of setting axles, for all kinds of vehicles, so as to have the least possible friction. But if he means that geometrical construction is abstruse, I dissent from his opinion; for, in this nothing more is involved than simple and plain truths in geometry, applied in such a way as to enable the mechanic to construct his axles to conform to a predetermined or "apparent" theory.

The writer of this article, with years of experience and study on this subject, is unable to see any substantial grounds on which to base a *universal* "plumb spoke" theory. It looks to me very much like another theory advocated by many wagon makers, viz: that all axles should be made straight on the bottom, or without "pitch," either up or down. In each case but *one* element of construction is taken into consideration, every other principle being lost sight of in the eagerness with which they advocate and defend their one pet idea. But my article is already too long.. My object has been to awaken thought on this all-important subject, and with one question more, to this end, I will close; it is this:

What peculiar relation does the *universal* "plumb spoke" bear to the *pressure* and *freedom* of the box on the axle-arm, so as to cause the least possible friction?

Should this article prove acceptable, I will give my views on the subject in a subsequent article, and show the *fallacy* of the "plumb spoke" theory. Yours, respectfully,

WEBSTER THOMAS.

For the Coach-Makers' International Journal.

ENGLISH vs. AMERICAN VARNISH.

PHILADELPHIA, June, 1869.

MR. EDITOR:—I am a subscriber and I may add a careful reader of the JOURNAL. While I feel deeply interested in whatever pertains to our trade, in its respective branches, it is but natural for me to take a more lively part in my own, namely, the painting. There are many subjects which might be discussed with profit to our branch, and I am pleased to see that English *vs.* American varnishes is calling out articles, which, if pursued in the proper spirit, will undoubtedly terminate in lasting benefit to both employer and employed.

In the March number two questions were asked; the second one being the most important, viz: "Is there an *American* finishing varnish used at Philadelphia or New York which you could recommend?" P. Alette's answer was: "We know of no American make of finishing varnish which is used to any great extent for finishing."

In the April number we had quite a lengthy article from the pen of Henry Harper, of Butler, Ill., who, while he talked of common sense, of his imperfect education, and also "philosophized a little," failed to give *me* sufficient proof that there was an American finishing varnish equal in every respect to the English.

It would occupy too much of your valuable space to follow Mr. Harper throughout; one thing we deny, that is, that even "*some* builders or painters" prefer the "English, because it is imported at great expense."

There may be a painter here and there who, having the confidence of his employer, and the charge of the paint shop, can be bought up by a varnish agent, and influence the employer to purchase an inferior article, but we know by experience the majority of painters are no respecters of persons, and will use no varnish, be it American or English, which does not, after a fair trial, build up the reputation of the employer, and secure to himself the credit of doing first-class work. A pair of boots worth fifteen dollars, or pocket money to be spent in buggy riding, or in any other way, are no temptations to an honorable foreman. He says to the varnish agent: No, sir; I will not place myself under your lash. The question then to be settled is: Can we procure a home-make of varnish equal to the English? Thus far *I* have failed to secure it. I have not used the American of late, for the simple reason that I had tested it in years gone by, and invariably found it inferior to English in its working qualities, body, lustre and durability. It is humiliating to acknowledge that the English possess a secret in the manufacture of finishing varnishes which *we* have (in my opinion) failed to search out.

There is a peculiarity about English varnish which it would be well for *our* manufacturers to look into, viz: The property of thickening up when it comes into contact with the air. When a coat of English is spread on, it flows out beautifully, and appears to increase in body, and, as the painter terms it, "looks fat." It has a depth and richness far superior to any make I have had the good fortune of seeing.

In my experience, while *our* varnish makers have equalled the English in paleness, in light body, and, when first applied, in lustre, yet, after the job had stood over night, we invariably discovered that the gloss was fading out, or the varnish was sagging down toward the lower edges of the panels. I do not mean sagging into runs, but in appearance as if it had been laid on very light above and heavier below.

I believe to-day, as I have for years past, that our varnish makers have the ability to make as good and fine a varnish as the English, but that they are at present, and always have been, in too great a hurry to put their stock in the market. From the best information I can obtain, the English manufacturers use *purer oils*, and more carefully selected gums, and that they do not trust to this one and that one to oversee the kettles, and when the varnish is drawn off, rush it out among consumers before it is barely cooled. On the contrary they spare no time or pains in its manufacture. The oils are old and well settled. Amber and zanzibar gums alone are used. The "cooking" is attended to by experienced and trusty men, and after all these precautions have been taken, the varnish is allowed to stand and ripen.

Your correspondent, "American," makes some good suggestions, and concludes by asserting that "there are manufacturers in this country who make finishing varnish that will stand as long, and cover as much surface, and give as good a finish as any English varnish, provided they are used as carefully, and the work prepared as well as it *must* be for the English." That is a broad assertion, but I will not deny it, and trust that it may be true to the letter.

If it can be proven to me that an American varnish is in use, which is as good as the English, I, for one, will not hesitate to give it a trial. Will "American" give the names of those who have fully tested it, so that we may be induced to try it. I can see no other way to bring this matter down to the point we are aiming at in this discussion. Respectfully, PAINTER.

For the Coach-Makers' International Journal.

Setting Axles to bring Wheels on a Plumb Spoke by Measuring the Dish of the Wheel and Taper of the Box.

[*Concluded from page* 135.]

We have now given a geometrical way of calculating and comparing the angles of the dish to the wheels and taper to the box. The edge of the rule only shows the pitch that the axle should have. The next thing is to make a practical application of it to the bottom of the axle. For this purpose we have a contrivance at each end of the gauge stock, fastened to the rule at A, that moves with the rule in working any problem. This holds the gauge, composed of screws fastened into a slide, that are to be held on to the axle arm to set it to, so that when the problem is worked the heads of the screws have assumed the position that the axle is to be set to. The slides are moved lengthwise of the stock, so that a figure on them that corresponds with the length of the axle arm is opposite of a notch in the clamps that hold the gauge. This gives the length that the axle should be between the collars for that length of axle arm.

The ¼, the ⅛, and finally 1-16 inch gather, that formerly was considered necessary to give to axles, at the present day has tapered down to *nothing* in the most of the best factories. This fact I have ascertained by measuring wheels of the wagons and carriages of such factories on the forward and hind side, which measure shows the same distance apart. The philosophy of this improvement, when considered, is so apparent that I deem it unnecessary to make any remarks on it; yet, for the benefit of those factories that are not fully aware of this change in practice, I make this statement. It is one of the secrets that the craft endeavor to convert to their personal benefit, and shows the great folly that some mechanics subject themselves to by not taking a publication that will discuss such things, and divulge such secrets.

After having described a geometrical way of calculating the pitch that axles should have to correspond with the dish of the wheel, that does not take more than twenty seconds to form a pattern suitable to work the two axle arms of an axle to, after the dish of the wheel and taper of the axle box has been measured, I will make a statement of a case that shows the benefit of setting axles geometrically correct, and give names and places, so that any one can detect the error, if any is made, in the statement. It is not a case where Harper's gauge was used for calculating the pitch, nevertheless, it shows the correctness of the general principle, and the benefit to be derived therefrom.

Mr. Salmon White, of Berlin, Wis., who was a working man that philosophized on what he was doing, so that he had a way of his own about machinery, ordered a dray wagon of Mr. A. J. Work, of the same place, that had peculiarities about its construction. The wheels had but the least trifle of dish, and in order to give them the necessary strength that no dish would deprive them of, the shoulders of the spokes that went into the hub was made much wider than was usual to make them, which had the same effect of a dish.

Mr. Work could easily calculate the pitch of an axle for such a wheel, by making the axis of the axle straight, which would make a pitch upward of the under side of the axle, the amount of the taper to one side of the box. At all events the axles were set right, in proportion to the dish, so that the wheels stood about half-inch wider on the top than bottom. The wagon, which was for one horse, was put in a business that was almost as constant as the working days, and was frequently loaded with 4,600 pounds, (one horse!) Yet, year after year, it was the same perfect wagon, without a penny's repair that I have knowledge of. After seven years use the tire was worn out and replaced by new ones. The wagon was used about two years more by Mr. White, who by this time had accumulated a handsome property with it, and then it was sold for more than it originally cost him. The axles and boxes on the day that it was sold, after nine years of constant use, were as good as they were the first day of their use. Mr. White told me that he was well satisfied by the wear of his wagon, that if axles were properly set and kept so, and then properly cared for with oil, they would last any man's life time.

Another wagon was built in the same place for Mr. Bassett, patterned after Mr. White's, only it was expected to excel the latter by more work that extra pains would give it. The result will show how trifling a thing will disconcert all of a man's calculations. First, the wheels were made with as little dish as Mr. White's, and the spokes were not made any wider where they entered the hub than ordinary spokes. The result was, after using the wagon four or five weeks, the tire became loose and had to be reset. This gave the wheel more dish, and if the axle had been set right in the first place, it was not changed in the second place, consequently was wrong, therefore in a fair way to be worn out soon.

The above facts are related as briefly as they could be of transactions in one small city in one isolated case, that go to prove that manufacturers must adopt improvements when they can be backed by mathematical principles to show they are improvements. No amount of finish in work, or suavity in the salesman's talk, or any other circumstances that manufacturers think is advantageous, can be accepted long as an offset to a defect in the draft of a wagon or carriage, especially when that defect can be remedied to a mathematical certainty, with a saving of labor that will amount to no inconsiderable sum in one year's work. HENRY HARPER.

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER I.

INTRODUCTORY AND EXPLANATORY.

Some few years ago, I got a severe attack of "*going to sea*," and go I must. About this time I became acquainted with a queer, eccentric, good-natured trimmer, named Charlie Shears, who was what may be called a nomad mechanic, although he "was na mad at a'," but just a wee bit daft in the bump of inhabitiveness, running it to the other extreme. A combination of unpleasant circumstances in the shop offered our constitutional weakness a fair excuse to git up and git, and we got—(into a ship.) We might, perhaps, have gone anyhow, as we had (what my mother used to say) the "gallivant" in us, so Uncle Sam got a couple of hard-tack and salt-horse chawers, and we got our bellies full of salt water at his expense.

Now, my dearly loved fellow craftsmen, (no connection with the craft we sailed in,) do not expect a full and true history of the hanging—oh, I mean of the strange country called Japan, or of the other countries we saw or stopped in. This sketch is not a history. I will only give my rough and sometimes unconnected ideas of what I saw, but never expect to see again, for the things that I saw there they frightened me quite; and ever since then I have scarcely been right.

"Tell you how I feel about it; it's this here: I shan't stand it much longer; I've got about tired of this 'ere work. Work all the time, and I hain't any better off than the fellows who takes it easy. Blowed if I don't get out of 'ere soon and take a trip. What do you say, Fred? Don't you think this ere thing of cutting a fellow's wages down in the middle of winter when they think a man can't help himself is convertibly mean? I mean to help myself somehow, for I'm blowed if I stand it."

This was the burden of a "growl" during dinner hour from a big-hearted, independent trimmer, and he had been harping at it for a full week, ever since our employer, Mr. Edgeup, had "*cut us down*" 15 per cent. at a time when there was no occasion for it, as business was good, and our shop driving to be ready for a good spring trade. But our "skin flint" thought he had us, and he put on the screws, (as above,) but he didn't quite have us. We were a good deal like the conjuror's ace of spades, "now you see us, and now you don't see us;" and as my chum, the trimmer, said: "blowed if I stand it," was my motto also.

"But what are we to do," answered I. "You know it will be hard to get a job just now if we leave, and I have not much money at the present time, (gospel truth, I never did at any time;) still, I'll jump it if I see a chance, Charlie."

Now, my friend Charlie Shears was a splendid fellow in his way, and as independent as a boozy Indian; but his great drawback was his unsettled, roving disposition, which would never allow him to remain long enough in any place to create any social ties, or bring about a fondness for a locality. Usually about the time he was getting acquainted, and things were getting to be homelike, then some real or imaginary cause for a flitting would turn up, and away he would go without a word to any one, never telling (perhaps not knowing) where he would next turn up. His idea appeared to be to *loose himself*, so that his independence would not be jeopardized. He was a regular "bird of passage," in fact, a sort of Christianized "Wandering Jew," and to me the funniest part of his ideas was, that he used to imagine he was a very steady, regular fellow, and he used to often remark about this or the other party who was such a strange person, "why he never settles down at all; he is all the time going about," forgetting that he, himself, was "ever on the wing."

Charlie made very few friends or acquaintances; he was a silent sort of a person, who scarcely ever spoke unless spoken to; at first I had an idea that there was something on his mind, and that he was, by constant thinking of it, always fretting and fearful, and that his habit of constant movings from city to city was that he might get away from his trouble; in this I was all mistaken, for, on knowing him, he proved to be, as I have before stated, a whole-souled, independent fellow, and as happy and light-hearted as a boy.

I had worked with him some four years previous to the time of this "growl" about wages, and he appeared to have formed a liking for me, *in his peculiar way*; but, as usual, he went off one day, and I saw nor heard no more of him for a year, when one day he walked in and held out his hand, with a "how do you do, Mr. Pumice." "Why, hallo, Charlie," responded I, "how are you; where have you been; why did you not tell me you were going off?" "Oh," said he, "it made no difference." He sat down on a barrel until dinner time, and then went out with me, took a drink and went off. I expected to see him that night, as he had my address, and I had asked him to call, but nary call; and nary a Charlie did I see for another year, when he came in the shop again in his quiet way—said how do you do, Mr. Pumice—and I saw him no more for another year; then he came to work in the shop, and he began to be very sociable to me; he came to board where I boarded, and we became fast friends. I don't think he had a relative that he knew of, and he must have growed up—for he could not have been raised—he was so peculiar. One of his peculiarities was a fondness for using *big words*. He would use a big one or none, and the worst of it was that they were most unfortunately placed. In fact, they were *stuck into* his conversation by guess, and used only because they sounded well to him, and not because they were right—really, he did not know if they were right or wrong. I often thought his education must have been begun at the wrong end—that he was learned all the high-flown words of the English language, and that when he had acquired *them* he was taken from school before he had had got as far as A, B, C. "Tell you what my concernment of the present perplexed rendition of our affairs is, Fred. I am contimely fatigued of this country, and have been consecutively thought that I would ask you to be my companion in an exposition to China and Japan. I saw a convertisement on a shipping office to-day for hands to go there in a ship which is convertised to depart on the 21st of this month—that would give us two weeks to get ready. What do you say, Fred?—let us go, and when we get there, if things are as good as they are depresented, why, my boy, we can stay there. These Yankees are now getting pretty thick among the See-lesstshalls, and if everything goes right, there will soon be a demand for mechanics at our business there, and if we get there first, we will have a good chance, perhaps, to get into business for ourselves."

"Oh, business be hanged! What's the use of talking about business like ours amongst the 'moon-eyed;' they don't use carriages, because they have no roads, and their ideas don't run on wheels. But, leaving business out of the question, I have no objection to a cruise to Japan, provided we get into a good ship; but I do object to making the voyage as a sailor before the mast in a merchantman. If we could ship for some man-of-war going out there, then I've no objection, because, in navy ships, every man has his place and his duty, and he is not made a dog of, which, the chances are, would be the case in a trading vessel. So if, as Jack Bunsby says, 'so be it as how we gets into a man-o'-war, then so be; but if so be as how we has to go in a trader, then be it so;' but of all things remember as I've been to the briny before, and my name is FRED. PUMICE,

Bound to Japan, if he can get there."

For the Coach-Makers' International Journal.

SETTING AXLES, &c.

MIDDLEBURY, VT.

MR. EDITOR:—I notice that a great deal is said in your JOURNAL upon the subject of setting axles, and on this subject I should like to say a few words, giving you the same liberty your correspondent from Wisconsin has on page 105 of April number.

An experience of over 50 years, with a little of my own reasoning, or philosophy, teaches me that it is of much less consequence how much an axle is pitched, than how much it is gathered forward.

If I was to make a carriage, with *strict regard to easy running*, I would take say a plain Concord axle, good length box, and set it *exactly straight on the bottom;* then move the centre forward a mere shaving, (I would almost say the less the better.) One-sixteenth of an inch is twice or thrice too much; then make the wheels so that the centre of the tire shall be under the centre of the box.

The dish of the wheel has nothing to do with the run of the carriage. Much is said of a plumb spoke, but it is all in your eye. It is the location of the felloe, as compared with the box, and set of the axle, that governs the running.

The dish of the wheel is to be considered when you talk of strength and durability for rough and sideling ground. I think from $\frac{7}{8}$ of an inch to one inch, before the tire is set, is about right for 4½ feet heavy wheel.

To avoid the cut-worm, if you mean what I call the powder-post worm, I know of but one way: that is, to expose the timber, when green, to the sun and rain until the *sap is sour*, or changes color a little. They are doubtless bred in the sap.

To avoid the coarse grub-worm, shave off the bark from all *green* plank or timber; this will be found a certain remedy in both cases.

I have written much more than I thought of doing when I began. The gather on the axle is the point I designed to make. You can make what use you please of this. I. A.

For the Coach-Makers' International Journal.

PEACE JUBILEE.

BOSTON, June, 1869.

DEAR JOURNAL:—The Hub is the scene of unwonted confusion and intense hilarity. The Jubilee is a great success, and the people are satisfied. So great is the throng of visitors that thousands fail of gaining admission even to standing positions. The writer, being one of the latter class of Boston visitors, determined to compensate himself in part by a visit to the Linden Carriage Spring and Axle Works, situated about eighteen miles from this city, in Walpole, Mass., on the line of the Boston, Hartford and Erie Railroad. The reputation of the goods made at these works is not exceeded by any manufacturer, and they are almost universally used in this locality by makers of best vehicles. With the President, Mr. H. W. Tilton, we passed through the extensive works, and listened to the manner in which such a reputation as this concern has was won and is maintained. The President's motto is, "Best material, best workmen and critical inspection secure satisfactory results," and surely nothing is left to chance.

The steel used is the best Swedes, and is made expressly for the Company, at Sheffield, England, where every bar is broken and closely inspected. The springs, when completed, are submitted to wonderfully severe tests, it being the determination of the examiner to follow the instructions of the President literally, and break the spring before it leaves the works if it is to be broken at all.

The Linden axles are under the same system of test and inspection as the springs. Several varieties of these are made, but those of Bessemer steel, with case-hardened malleable iron boxes, are mostly in demand, and draw upon the whole capacity of this department to afford the supply called for. If any evidence had been wanting of the great demand for Linden springs and axles it was supplied in a view of the packages being shipped to all parts of the country, the trade extending to California, Oregon, and even as far as Australia.

We left Walpole at 6 P. M. for Boston and its crowd of curious, where we arrived at 7 o'clock, feeling well repaid for our trip.

Yours, truly, COLISEUM.

For the Coach-Makers' International Journal.

THINGS IN NEW HAVEN.

MR. EDITOR:—Having promised to keep you posted in regard to events transpiring here in New Haven, which might be of interest to the craft, I thought a few words concerning the amount of business done might be acceptable to your readers, for we all like to know what, and how much, others are doing, who are in the same trade as ourselves.

New Haven is supposed to have thirty-seven carriage shops, good, bad and indifferent, employing about one thousand workmen, who produce nearly *two million dollars* worth of work annually.

The variety of carriages built includes every vehicle, between an eight-spring landau, and a one-wheel velocipede, although the latter contrivance is not manufactured to any great extent.

The quality of the work, as a whole, is good, much of it the very best; some may be called the very worst, for there are shops here, as well as elsewhere, which are termed butcher shops, and very properly, too, for their motto is—"bleed, skin and sell," and most effectually it is done; they bleed their creditors, skin their workmen, and sell their customers, impoverishing all who deal with them, and are always poor themselves, although I have known some of them to be called good, rich dealers.

The condition of trade with us at the present time we should call good, if our expectations had not been so high. We all anticipated a *very large* trade when the spring market opened, but in April and May the number of sales was rather less than usual for those months, and everybody was inclined to have the blues, and prophecy a dull season; but June has been more propitious with us; sales have been active, and at fair prices; a large per centage of the work going direct from the manufacturer to the consumer, without the assistance of the dealer. More anon. VIDE.

For the Coach-Makers' International Journal.

TRIMMING AND PAINTING.

ASBURY, NEW JERSEY.

MR. EDITOR:—With your permission I would like to ask Mr. T. Acks, Editor of the Trimming Department, some information in trimming a buggy top.

My trimmer finds much difficulty in making a top to fit and lay smooth on the hips, or where the welt is sewed in. Will you please publish in your next number how to proceed after setting the bows?

As to color, my branch being painting, I can, perhaps, give a few hints to P. Alette, as to the best way to color or mix paint. Give the body one prime coat, mixed with clear oil, and a small quantity of dryer. Afterwards give 4 coats of lead, mixed with turpentine and japan, allowing 3 or 4 days between each coat to dry; then apply 3 coats of rough stuff, mixed to dry hard, and rub down. After it stands about from 4 to 6 days, according to the weather, rub down and apply one coat of lamp black, ground in japan, adding a small quantity of varnish to set it.

Now proceed with color; mix with $\frac{2}{3}$ japan and $\frac{1}{3}$ oil, thinned with turpentine. One coat a day in this way will neither peel nor crack.

After two coats of color, apply one coat of hard rubbing varnish; rub this coat slightly, then apply another, and rub that until it is cut to a smooth surface. A piece of pumice stone made level, on a piece of hard wood, will answer the purpose.

USE GOOD FINISHING VARNISH. Every one has his own idea of which is the best, so I will leave the rest to your consideration.

I hope to hear from some one else in the next number, with, perhaps, a better way. Your JOURNAL is the best I have ever seen, and I shall continue taking it as long as I remain in business.

H. S.

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For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 4.

BY J. H. T.

SOMETHING BEAUTIFUL AND AMUSING.

To make the Silver Tree of the Philosophers.—Take aqua fortis, four ounces; fine silver, one ounce, which dissolve in it; then take aqua-fortis two ounces, in which dissolve an ounce of quicksilver; mix these two liquors together in a clear glass, with a pint of pure water; stop the glass close, and after a day you will perceive a tree to grow by little and little, which is wonderful to behold.

To make the Golden Tree of the Philosophers.—Take oil of sand or flints, and oil of tartar per-deliquium, of each a like quantity; mix them well together, then dissolve gold in aqua regia, and evaporate the menstruum; dry the calx by the fire, but make it not too hot, for then it will lose its growing power; break it into little bits, but not reduce into powder, which bits put into the aforesaid liquor, a finger's breadth one from another, in a very clear glass; keep the liquor from the air, and let the calx stand still, and the bits of calx will presently begin to grow; first they will begin to swell, then put forth one or two stems, then divers branches and twigs, so exactly that you cannot but wonder to see. This growing is not imaginary, but real.

To make the Steel Tree of the Philosophers.—Dissolve steel in oil of salt, so that you have a green and sweet solution, smelling like brimstone; filter it, and abstract all the moisture with a gentle heat, and there will distil over a liquid as sweet as rain-water; for steel, by reason of its dryness, detains the corrosiveness of the spirit of salt, which remains at the bottom, like a blood-red mass, and it is hot on the tongue as fire; dissolve this blood-red mass in oil of flints or sand, and you will see it grow up in two or three hours like a tree, with stem and branches.

To make the Oil of Flints above-mentioned.—Take the most pure salt of tartar in fine powder, twenty ounces; small sand, pebbles, or flint, or crystal in fine powder, five ounces; mix them; put as much of this as will fill an egg-shell into a crucible; set it in a furnace, and make it red-hot, and presently there will come over a thick and white spirit. Take out the crucible while it is hot, and that which is in it, like transparent glass, keep from the air: afterward reduce this to powder, and lay it in a moist place, and it will dissolve into a thick fat oil, which is the oil of flints.

To make a Crystallized Camphor Tree.—Dissolve camphor in spirits of wine, moderately heated, until the spirit will not dissolve any more; pour some of the solution into a cold glass, and the camphor will instantly crystallize in beautiful tree-like form, such as we see in the show glasses of camphor in druggists' windows.

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JOSH BILLINGS says: "One of the fussiest scenes I ever listened to, was two old maids waiting on one sick bachelor."

Pencil, Rule & Square.

D. BOARD, EDITOR.

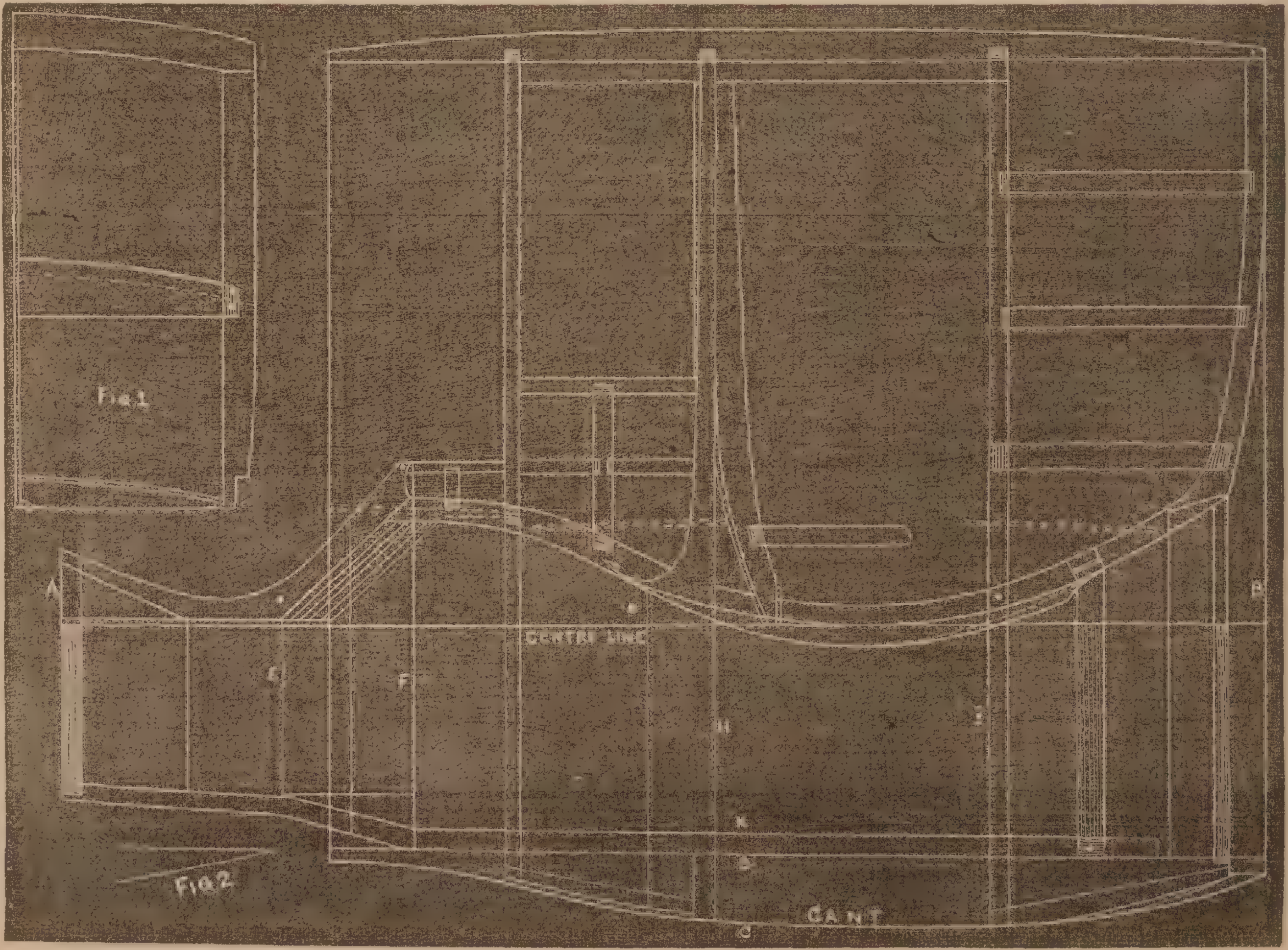
PART NINTH.

BY A PRACTICAL CARRIAGE ARCHITECT.

IMPROVED MANNER OF CONSTRUCTING THE SIX-SEAT ROCKAWAY.

FASHION PLATE NO. 37, WITH SIDE ELEVATION, CANT, AND HALF VIEW OF WINTER FRONT.

This drawing will show the manner of constructing this class of work—the side elevation being artistically drawn. By this we mean the outer, as well as the inner or moulding lines, to produce a correct piece of carriage architecture. In this we give the latest and most improved manner of construction, never before published, doing away with the heavy thickness of timber at the inside of the coupe pillar, lightening out clear to the bottom-side, thereby making, as the body-maker terms it, a "better job." We also give the manner of framing the front of door, doing away also with the deep rocker. This frame work is all paneled over, coming into a groove in the coupe pillar, making all shoulders of the frame work to cross the grain of the panel. The scroll of pillar, at the cross-line O, is glued on when the body is being finished.



This body has 4½ inches turn-under, the doors shutting against the rocker. There should be a berth cut into the bottom door-rail, allowing the glass frame to drop as near to the bottom of the rocker as possible; this gives a low door panel.

The short bottom-side from the hinge pillar back, coming down to the bottom of the rocker, the moulding being boxed down, and the rocker being cut off, as represented by the dotted lines, is for the purpose of bolting the iron pump-handle or break too, giving it the appearance of growing out of the inside of the rocker. The rocker plates should be 2½ by ½-inch, with a flange to receive the cross-stay for the cross-spring, to take two bolts. It is also well to turn a corner on the back bar; this plate to be secured with No. 20 screws, 4 inches apart.

You will now proceed to lay out the cant, which is from centre line to roof-rail line C, and from the top-rail line A to back-line B. Half the width of body on line B, from centre line to line C, is 21 inches; from the same points on line I, 26 inches; from same points on line H, 25½ inches; same on line A, 15 inches. This produces a very narrow front, at the same time it gives a wide front inside seat. This is obtained in framing up; in the bevel of the piece between the lines E and F, and as laid down in the cant, and shown by the front view of it in Fig. 2, it gives the carriage, when completed, a graceful and very stylish appearance.

The swelled panel at this point is produced by the grain running the same as the lines drawn. We have given the width of the body at the different points, and also have described our improved manner of construction. For establishing different lines and points, we refer you to our publication of the French Rule.

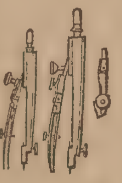
Fig. 1 represents half view of the winter front. This is made with a wide centre rail, and fitted between the front pillars, and sawed in two at the dotted line. The bottom part is made stationary, the top part dowled to it, and locked at the top, which can be removed for summer use.

SCALE DRAFTING.

(Continued from page 138.)

SPRING BOW, PEN AND PENCIL.

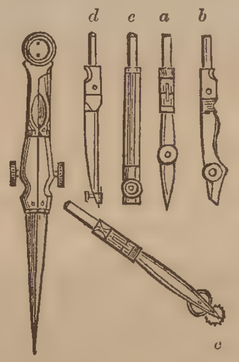
The leg body and handle are made of one piece of German silver or brass, three inches long, for describing small circles from one-sixteenth of an inch to two inches in diameter, such as heads of screws, the hubs and tires of wheels, &c. The lower end of the leg is finished with a small tube and clamp screw, for receiving and retaining a needle point; the body is almost twice the width of the leg, and a groove is cut the whole length of one of its sides; the pen or pencil point is attached to a tempered steel spring, the end of which is screwed fast into the upper end of the cut in the body; a steel wire, half an inch long, with a fine thread cut on it, is fastened into the body, and passes through the spring just above the pen or pencil point; a nut is screwed on the end of this wire, and bears against the spring, and forces it in or lets it out of the cut in the body, which brings the pen or pencil and needle point nearer together, or puts them farther apart.



DIVIDERS, WITH CHANGEABLE POINTS.

If an arc or circle is to be described faintly, merely as a guide for the termination of other lines, the steel points are generally sufficient for the purpose; but when arcs and circles are to be drawn permanently, and to show clearly, one point of the dividers must carry either a lead pencil or ink. To accomplish this the steel parts of the legs of the dividers are made so that they can be taken out and replaced by pieces, either for pencil or ink; the small screws in the middle of the legs retain the points firmly in their places.

The annexed cut illustrates a set with a pen point, *a;* a pencil point, *b;* a dotting point, *c;* a needle point, *d;* and a lengthening bar, *e.*



The pen point, *a*, consists of two steel blades, so bent that when the points nearly touch each other there is space above for holding ink; the two blades are drawn together or put apart by a regulating screw in the middle. One of the steel blades works upon a joint at its upper end, so that the ink can be thoroughly cleaned off when the pen point is to be put away, and thereby preventing its being injured by rusting.

To use the pen point, after securing it tightly in the proper side of the dividers, the ink is put in between the blades by a common writing pen, or a camel-hair pencil, which should be drawn down and out between the points, then the points of the blades are brought to the proper distance apart for making the line; the closer the points are together the finer the line. The point of the pen must always be as near at right angles to the paper as possible; a joint is made in the German silver part of the point to regulate the proper inclination.

The pencil point, *b*, is made of German silver, the lower part of which is formed into a tube; a lead pencil is placed in this tube, and held tightly by the clamp screw on the side.

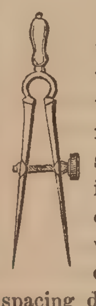
The dotting point, *c*, is exactly like the pen point, with the addition of a small-toothed wheel, which revolves between the points of the blades, each tooth leaving a dot wherever it touches the paper, and thus, instead of a continuous ink line, a line of dots is made; such lines are meant to illustrate the course of an imaginary line or arc.

The needle point, *d*, is made similar to the pencil point; the tube on the lower end is only large enough to take a fine needle, which is held securely in its place by a thumb screw on the side. The needle point is put in place by one of the steel legs of the dividers when a number of arcs are to be made from the same centre; it does not deface the drawing by large holes, as the ordinary steel points would. The pen, pencil, dotting and needle points are all made with a joint near the upper end, in order to bring the points at right angles with the paper.

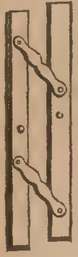
The lengthening bar, *e*, is made wholly of German silver, one end of which fits in place of one of the steel legs of the dividers, and the other end has a socket and binding screw for receiving and holding the pen, pencil, or dotting point. It is used when larger circles or arcs are to be drawn than can be made by simply extending the legs of the dividers. The side of the dividers into which the needle point fits, also the steel point and the needle point, are marked on the inside with small dots to indicate where these points are to be put when used; those points which are not marked thus are to be used on the other side of the dividers.

SMALL SPACING DIVIDERS.

In carriage drawings it frequently occurs that a large number of small equal distances are to be set off, not only at one time, but repeatedly, upon the same drawing. For this purpose the ordinary dividers are too large and inconvenient to handle rapidly, and having nothing but the joint to hold them in their position, are liable to get their extension altered. For such work there is used a pair of very delicate dividers, made altogether of steel, the two legs of which are united at the top by an arched spring, and drawn together or opened by the screw in the middle. On the top of the arched spring an ivory or German silver handle is attached by which the instrument can be quickly turned over and over when used in spacing off a number of equal distances. The size of the spacing dividers mostly used are three inches long, with the legs delicately rounded from the regulating screw to the points. The advantages by these spacing dividers are, greater nicety and accuracy of adjustment, and no liability of accidental change when once adjusted.



PARALLEL RULER.



This consists of two straight edges, of ebony or metal, six inches long, by three-quarters of an inch to one and a half inches wide, joined together by two parallel strips of brass, which move upon pivots at the points where they are attached to the ruler; thus, when the bars are put apart they are always held parallel to each other by the brass strips, consequently, if the edge of one of the bars is brought to a line and firmly held there, and the other bar pushed away from it, a line or lines drawn by the second bar will be parallel to the original line.

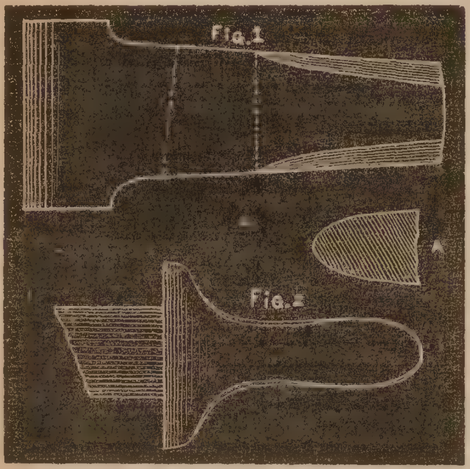
Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

TOOLS.

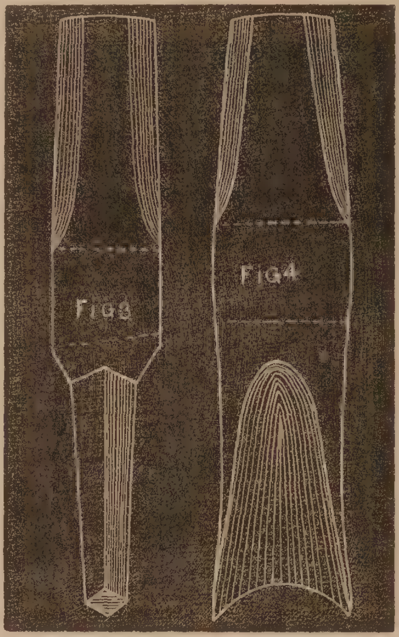
The review of the blacksmith's tool bench, comprising the order hammer, used directly, or to finish under the slight sledge, introduces next the

Fuller, Fig. 1, and Fulling Block, Fig. 2.—Fullers are reversed swedges, and are used for setting off collars, carriage stays, steps, or any part requiring a scolloped or concave finish. The width of face varies between 3-16ths up to 1½-inch. Small sectional cut *a* shows the shape of face. The largest ones to finish slight bends, as for fifth wheel sockets or brackets on heavy work; a glance at our illustrations shows us that they are indispensable for making tools.



Square Puncheon, Fig. 3.—Their size varies as to the more or less complicated work a smith is called to perform; a corresponding square hole receives the piece cut out, to keep the edges of the cut true. The utmost care must be taken to punch the hole square, as the striping will afterwards show the deficiency only too plain.

Gauge Chisel, Fig. 4.—It only deserves notice as to its use, either for trimming step sockets or plates, or shaping the ends of rounded narrow plates; the object of its illustration is to show compact proportion, which prevents jarring.



Flatter for Clips, Fig. 5, especially for fifth wheel clips, spring or bracket clips. A tool for this purpose has to be made very exact, as it saves time and finishes a piece as in a drop.

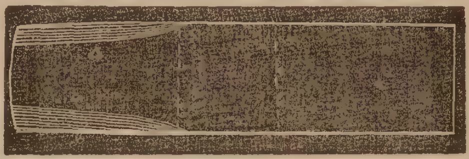


Fig. 5.

Flatter, Fig. 6, stands, in regard to utility, in the same line with the plane of the wood-worker. For a 2½-inch square-faced flatter will issue an exact counterfeit of the inside of rocker to the rocker plate fitted thereon. Rocker plates for light work are beveled on the inside top edge of parts exposed to view, also in the space of doors on heavy work, which depends in point of neatness solely on the skillful handling of the flatter.

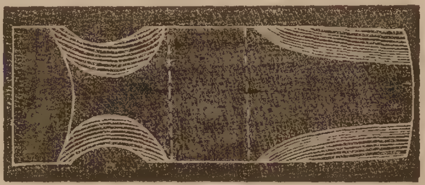


Fig. 6.

Bob Punch, Fig. 7, has a round face similar to a countersink, to press a cavity in a flat piece of iron, intended to have an upright, round or square piece welded on to it; as, for instance, a square socket to a swedge block, or a round lamp socket to the bearing plate. The piece to be welded on is fitted to the impression of the bob, to give the job a firm bearing. Rapid heating and shutting out of the air are essential at welding. The pieces to be welded, if heavy, are coated with sand, for the purpose of floating with the dross on the surface of the heated piece, shutting off the air, and agitating the heat necessary for welding; before hammering together, remove the dross. If you take green, gassy coal, you can dispense with the sand, only cut in the surface with your chisel, which will aid the hot air as well to penetrate as to escape, just the same as the Bessemer process of melting steel. Use borax for covering for light dash rails, which require a quick heat. Soft iron and hard iron will weld difficult, the former is apt to shift off. You will have to heat again and strike carefully. Some weld steel to iron, giving the steel a wedge-like shape, and the iron a corresponding opening. To prevent the steel from sliding out, cut burrs on the surface of the steel and strike light at first. Iron containing less carbon requires a high degree of heat for welding; therefore, the better quality of iron is to be brought to a white heat, almost commencing to burn under lively sparkling. A good weld joint should defy detection, and only show a slightly darker margin.

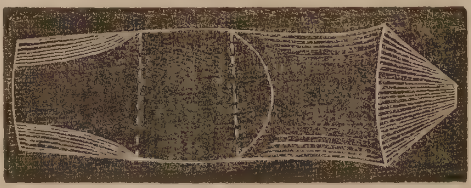


Fig. 7.

Small cast-steel tools, as punches, &c., when burned, might be restored by the following mixture: two ounces of bichromate of potassa, one ounce of pure nitre, one ounce of gum aloes, one ounce of gum arabic and two ounces of resin. After powdering and mixing well, heat the steel to a low red heat, and put the powder on. It is then heated again, as before, and cooled, which will make the steel very hard.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

THE ART OF COACH PAINTING.

(Continued from page 142.)

CHAMOIS.

"The shammy," called the "wash leather," by some painters, is used for drying off the surface of work, after washing it with water.

The "chamois" is an animal of the antelope kind, the hide of which furnishes a very inferior quality of leather, and was probably used originally for the purpose above stated, as well as for many others. But the skins now in general use are not of that kind, and might be more appropriately named *sheepies*, as they are what is termed alum-dressed sheep-skins.

They are different in quality; the best being compact, yet soft. The cheaper kind are spongy and almost worthless. The shammy gives off furze when it is first put into use, which may be kept down in a measure, by wetting it in water;

wring out, and hang up until dry. Repeat this once or twice before using it.

The shammy should be kept clean, and free from grease. The hands and face should never be wiped with it. When it will not dry up the water readily, spread it out on a clean, smooth piece of board, and with soap, water and a piece of curled hair, scour it well on each side, and rinse it in clean water until the soap and dirt are removed.

Those used in the finishing rooms are to be kept for that purpose alone. They improve by use, and are generally more highly prized by the painter when worn to shreds. When a good piece of skin has two or three small holes worn in the centre, it may be preserved for a considerable length of time, by sewing up the holes with sewing silk. Place the edges together, whip them over neatly, then open the shammy, and pound the seam down flat. We have saved a favorite piece of leather for months of usefulness by this method. There is no fear of it scratching the surface.

THE PALETTE KNIFE.

This instrument is generally made of steel, should be highly tempered, thin and flexible. They are also made of ivory, horn and bone.

The carriage painter requires but one kind, as the colors used are mostly of that nature, which are not affected by the action of steel. A steel palette knife, with a blade from nine to twelve inches long, will suit for all the purposes of mixing the colors used for bodies and carriage parts.

Those with blades about five or six inches long, are best adapted for handling striping and ornamenting colors. Ivory, horn and bone are used by artists who wish to keep the colors pure that contain any portion of arsenic. Realgar, Orpiment and Lemon Yellow are of this nature—the steel knife causing them to assume a greenish hue.

PUTTY KNIVES.

The putty knife is one of those indispensable tools, with the painter, which should be well made and rightly tempered. The carriage-painter requires quite a different one from the house-painter.

They should have enough *spring* in the blade to give slightly, in the pressure required to fill holes, or to plaster grain. Those made flexible, only at a point near the handle, are a *nuisance*.

The blade should spring from the point through its whole length, not a great deal, but sufficient to be perceptible. One thus tempered will do the work far better, besides relieving the wrist and hand from a good deal of the strain on them.

For the ordinary puttying on carriage work the knife should be, say one inch and a quarter across the bevel at end of blade. Sizes ranging from half an inch up to two and half inches are useful at times. The half-inch knife will be found convenient in puttying narrow places on bodies.

It is well to have three sizes. One, say half an inch across the beveled end of the blade; one, an inch and a quarter, and another two inches and a half. The smallest and largest size here given you will probably have to order made. The half-inch blade will be useful in puttying narrow places, the inside edges of rockaway doors with drop lights, coaches, &c. The largest size for plastering large panels, which economizes time and labor, as well as making a better job. The medium size will answer all ordinary purposes.

The point of the blade should be kept free from dents or nicks, and when it wears out hollow in the middle, grind it off even. The edge requires to be sharp, but not in the sense that we speak of a pocket knife; it should be rounding to prevent scratching or cutting the surface. Keep it free from putty and paint, handle and blade.

TRESTLES.

The trestles required by the painter differ from those best adapted to the other branches. While the wood-worker, blacksmith and trimmer wish their work to stand solid until finished, the painter must be continually moving. He must daily be moving bodies in and out, up to the windows for light, and back from the windows when coated or rubbed. If the trimmer wants a body, light or heavy, he generally notifies the painter, who is expected to carry it, by help of other painters, or roll it, if he has a suitable trestle, up to the trimmer's bench; and thus it goes from day to day, move! move! move! Now, to lessen this wear and tear on the painter, he should be supplied with wheeled trestles without stint. True, the light buggy bodies may be handled on barrels, to which we are very partial. But barrels will not answer the purpose when bodies are to be moved from one room to another.

We prefer the square framed trestle, set on four heavy castors, for bodies, other than six-passenger rockaways and coaches. They should be well braced with iron, on two sides at least, and the braces placed so as to admit of the steps having ample space to play in. It not unfrequently occurs that a *new* body has to be finished with the steps attached, and it is found difficult to set the body solidly on account of the steps or back braces of the same coming in contact with the top bars of the trestle giving a rocking motion. But as new work is generally painted with the steps off, the manner of bracing mentioned will be found of greater advantage on old work. In the hurried season it is a waste of time to take off the steps, which has to be done unless the trestles used admit of the body sitting level.

Trestles for heavy work are constructed differently, varying according to the ideas entertained as to which style is best suited to the wants of the painter. Those made long enough to support a coach body back and front, save a great deal of trouble in bolstering up the body with plank, boxes, &c. The front is made the highest, or adjustable, that it may be regulated to suit the variation in the height of fronts; it has two wheels, and is operated by a pole.

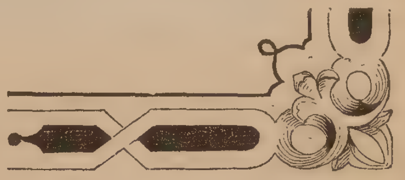
Another kind, which is framed only to the size of the bottom of the body proper, will answer every purpose, and take up less space, which is no small item in the paint room. It should be made very strong, and have two wheels fifteen inches in diameter, with two inch tread, if made of wood. It requires a pole, or the pole may be dispensed with by bolting the body and trestle together, and the job moved around by the dash, or a stick screwed across the front. The body may remain on the trestle until it is ready to be hung off.

For light bodies, we think, there is no trestle equal to those made with a *turn table* on top. The top of the trestle need be only eighteen inches square, and the height two feet six inches, when completed. It may be set on castors, or not, as the painter may choose. *With* castors, the body may be rolled back to a suitable place after having been finished, without the aid of another hand.

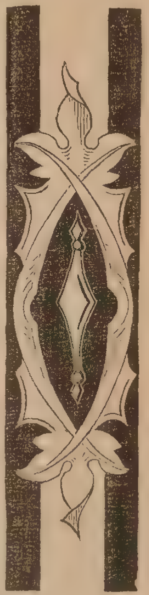
[TO BE CONTINUED.]

STRIPING PATTERNS FOR SLEIGHS, &c.

Corner Piece and Broad Stripe.—This will make a very neat and attractive corner piece, and broad stripe for sleighs, or other work where showy striping is required. The corner piece should be painted the same color as the broad line, shaded with dark tint of the same color, so that all will harmonize.

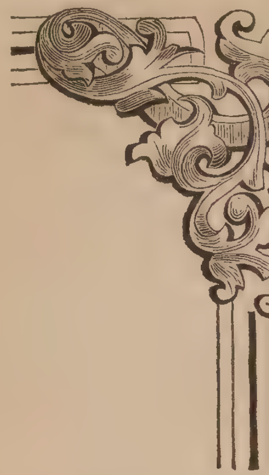


The dark color or broad line near the scroll, should be painted with the darkest tint used in shading the scroll, and put on the stripe when it is dry. It is not continued throughout the length of the stripe, as may be seen by the pattern. The fine line should be of a different color from any of those used on the broad line.



Ornamented Broad Line.—Another design for sleighs. This is intended to be placed in the centre of the stripes on the dash. On a dark ground, the centre and stripes will look best done in gold; on a drab, or other light-colored ground, the centre may be laid in gold, and the striping of a suitable darker color than the ground color, so as to bring out the full brilliancy of the gold.

CORNER PIECE.—Corner piece to connect with stripes. Paint it according to your own taste. The instructions given for similar patterns may assist the student in some particulars, but we would advise him to not rest satisfied with the few colors named in *our* explanations but experiment with others, and select from among them those which are most pleasing to the eye.



SCRANTON, May 10, 1869.

MR. EDITOR.—I wish to ask a few questions through your columns. How is gold leaf burnished, necessary tools, where can they be had? Where can I obtain printed or colored scrolls?

ANSWER TO QUES. 1.—We do not profess to be posted in the burnishing of gold leaf in any branch of trade outside of carriage painting. The necessary tools, however, may be bought of any respectable dealer in painters' and gilders' material.

On carriage and omnibus work the gold may be burnished, or rendered more brilliant, by laying on the fat oil, size very thin; lay on the leaf the second day after sizing in, and with a piece of cotton, or other soft material, rub the gold down until it is free of all joints and crimps.

QUESTION 2.—Printed and colored scrolls are to be had of dealers in artists' materials. Transfer scrolls, beautifully colored and elaborate in design, may be had of Janentzky & Co., Philadelphia; W. Atkinson & Co., New York; Chas. Palm, Cincinnati, and Isaac M. Inman, Jersey City. You may not be able to find scrolls to suit every variety of shaped panels you wish to ornament, but by having a few good patterns, by practice, you will soon be capable of designing your own, drawing them to suit any space presented.

NEWVILLE, PA.

MR. P. ALETTE:—Please inform me the colors used, and proportions to make a color called "Southern mud." J. A. G.

The color "Southern mud" is known by several other names, (and like the color known among old painters as London smoke;) very few painters agree as to the precise shade it should be. It can be made of umber, chrome yellow and black, or Indian red, chrome yellow and drop black. It is impossible to give exact proportions. Use the above colors in the proportion you wish the shade to be.

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

A DROP-BACK, WITH SPRINGS.

I have noticed that our drop-backs, such as we use in buggies and phætons, could be improved by placing springs behind them, for a support, as in heavy work. I was led to this from seeing all our backs broke in the middle, after being a short time in use; and they break because when new the lower edge touches the seat-panel, and there is a vacancy of 4 or 5 inches behind the back. Now, just as soon as the back is leaned against, why, as a matter of course, it caves in, there being no support to it.

This can be obviated by having the wood, on which the back is nailed, made to come down within an inch of the rail; then fasten 6 springs (chair springs) on the lower edge of the wood, tying them down to 3 inches or less; then nail muslin or canvas on the bottom of wood, draw it up so as to cover the springs, and nail it to the top of the wood; then sew the springs to it; next nail a piece of enameled cloth on the bottom of the wood, and draw it up so as to hide the muslin cover of the springs; next, when you are binding the edge (finishing) of your back, let the side binding hang over, say 4 inches, and stitch 2 straps, ¾ wide, to the bottom edge of the back, so as to buckle the back down to the bottom of the seat; then, when your back is nailed in, nail these hanging pieces of binding on the ends of the wood, so as to cover the ends of springs, and by leaving the ends loose in this manner, the back will have room to work on the springs. I have just finished one of these on a very fine six-seated phæton, and the back is really as comfortable and easy as a close carriage back, which would not be the case if it was made without the supporting springs; but please remember that I cannot recommend it on any but "close tops."

THE BACK PART OF CLOSE TOPS

Can be very much improved in appearance on *round corner* seats or jobs, by reducing the width of the back bow, say 3 inches, less than the other bows, and then fastening a piece of wood, 2 inches wide, on the back of the bow outside, and as thick as it. It should run well around the bend or corners; then give it a true sweep from the centre *outwards;* when fitting your top *do not* have the binding for the top edge any further out than the outer edge back stay; also, have a webbing stay from the bow to the bottom centre knob of back stay, for the purpose of holding the stay out, rounding when completed; let the back curtain hang very loose, and this method will give a nice round corner to your top, with the sweep continued unbroken all around, and it looks first-rate.

P. B. LANSING, Mich.—In reply to your question "Of how to make *a drop-back in squares, and how to lay it off.* We usually make it on 4-ply of buckram, pasted together. When dry, fit it to the *top* edge of back and *down* to within three inches of the seat-bottom, and out to the edge of the rail on the ends. Hollow it from the rail in toward the bottom, so that it will fit to the floor of the seat-panel.

Next, to lay it off—mark with a pencil 2½ in. from the bottom, then centre it from the ends. Now divide off, so that there shall be 11 buttons—the end ones to be 3 inches from the ends. Now, on the centre line divide it so that there shall be 4 rows of buttons, from bottom to top—the upper one at the centre to be not less than 3½ inches from the top of the back. Next divide the end rows from bottom to top—the upper button may be 2½ inches top of back—then, with a thin, straight edge, bent so that it will touch the mark on the ends and the mark on the centre, draw a sweep line across the back—you will thus have 4 rows of buttons from top to bottom, and 11 rows from end to end—the cross rows having nearly the sweep of the top of the back. Now lay down your cloth double, and with a square, from the centre of the cloth, draw a line 3 inches from the bottom. Next, set your compass ⅝ of an inch more than the marks on your buckram and divide the cloth along the base line already drawn; next, draw perpendicular lines (with the square) at each mark from the base line—this gives you ⅝ of an inch fullness in the cloth between each square, *from* end to end. Now set your compass ⅝ of an inch more than the distance between the squares on the *upright centre* line of your buckram, and divide upward from the base line. Do the same at the ends; then draw straight lines across the cloth at these marks from centre to end—this will give you all the squares with five-eighths fullness. Now, from the top line on the cloth, measure 7 inches at the centre, and 6 inches at the ends—this will give you fullness enough to finish the top of the back with a very full *roll.* Now punch holes through at your button marks; then line with muslin, pasting a little at each hole; then iron (press) down your creases, and run in 2 rows of buttons; stuff and run in 1 row, then stuff and run in the other. Now put your needle up ¼ of an inch at the side of each hole in the cloth, put on your button, and put your needle through ¼ of an inch at the other side of the hole. Pull all the strings tight, when finished; paste enameled cloth on the back, and bind the edge with turn-over welt, or sew in seaming welt, and behind sew your cloth to it as far up as the bottom corner of the wood back. Finish the top with seaming and pasting welt.

Poetry.

For the Coach-Makers' International Journal.

LABOR—NOT CAPITAL—IS KING.

BY CARL KOEHLER.

O, gold! thou glittering curse of human kind—
Thou petty cause of monstrous crimes committed;
Whose mere possession makes a sordid Jew
A king of kings! Thou idol, at whose shrine
In silent awe and wonder kneels the world—
While of them all the miser lowest bows,
Thy meanest slave—whose parchment face reflects
Thy yellow halo, and whose features rigid
Seem but the image of a golden coin.
From whence, oh, gold! came this mysterious power,
That tears each tie which nature kindly formed?
That causes sons to wish a sire's demise,
And hypocritical lament, when death
From beggared husband snatched a dowered wife;
That stiffens backs as with a magic wand,
Bent like a serpent's but the day before—
Turns over night the fondest eyes to stone—
Compassion deaf to pale starvation's groan.

Why is it, man of gold, that you look down
Upon your betters? who design or make
The chariot in which you take the air—
The mansion that your household gods contain—
The Bible, whose behests you meekly follow—
The gorgeous church, in which on cushioned seat
You once a week do penitence, that God
Has made you better than the rest of men!
Contented, then, this paragon of virtue
Rides to his palace home—again to deal
In paupers' wants, or, other words—to steal.

O, hollow vanity! that sees defects
In others worth, and but accomplishments
Within the folds of every bag of gold!
Why did the thought ne'er strike thee, *man of gold*,
That but for smarter men than you, there fain
Would be a bag your virtues to contain?

And, not content to lavish your contempt
On all who made with manual exertions
This globe sterile a paradise to you—
You coldly patronize e'en men of thought,
Who deal in worlds and measure boundless space—
Forgetting that your pigmy mind can grasp
But cod-fish barrels or yards of shoddy!
Off with the scales!—behold the light of truth!
Paid slaves, not freemen, are the people!
Why should these millions for the few be toiling—
Live but to toil—the few but to enjoy?
We, too, want rest—not merely for the bones—
But leisure, also, to improve the mind—
To lessen still the gulf imaginary
That separates the lowly from the rich.
Thus our banner to the breeze we fling,
Its motto: "Labor—not Capital—be King!"

Youth's Department.

For the Coach-Makers' International Journal.

THE LITTLE RIVULET ABOVE NIAGARA FALLS, NEAR TERRAPIN TOWER.

BY C. W. V.

To our young folks, the children of carriage-makers, the following lines were hastily written:

You have all, no doubt, read of Niagara Falls, and seen pictures of it. Probably your teacher, or your parents, have informed you that there are boiling, angry rapids above the cataract, that Terrapin Tower is built on a few scattered masses of rock at the very brink of the great fall, and that the river below the Falls is smooth and quiet.

Now, as even the lisping infants have been taught that, "Little drops of water make the mighty ocean," I hear you all say in chorus, Yes, and little drops of water, each one pure, sparkling and harmless of themselves, have united together forming the four great lakes of North America, and supply the vast body of water which thunders continually, day and night, over the rocks at Niagara. You are right, and you might add that, little grains of sand and other material have been tempered together by the Almighty, and formed into the huge rocks over which Niagara River frets and moans.

But what about the little rivulet? Well, I will tell you. A few weeks ago I visited Niagara Falls. Having looked at the mighty waters from the top of Terrapin Tower, which is forty-five feet high, I came down again to the little wooden bridge which leads from the tower to the island, and strolled along by the edge of the rapids.

About fifty feet above the great American fall, a few truant drops of water had strayed off by themselves from the angry rapids and formed a little rippling stream.

It was playing as children do sometimes, and in its play imitating the big waters. It was making miniature rapids, falls, and these made the smooth waters below the falls.

The rapids it formed were over the rough surface of big rocks, which were only peeping out of the ground.

Then there was a little Niagara Falls tumbling down about two feet; below the fall a smooth sheet of water, not more than four inches deep, and four or five feet wide. It had its little island, too. The twigs and brushwood were its trees.

I stooped down and drank of its cool water, stepped into it and took some up in my hands, and said to it: Can it be that you, that are now so harmless, formed a part of that foaming water that hissed and boiled over the rocks above?

Ah, yes, it rippled or replied: We don't like to have those ugly rocks in our way, so we all join together and try hard to move them. We know we cannot move them right away, but the big stream says we will clear them all away in time to come. But I must hurry on, for father is calling hoarsely over the big fall for us to hurry up and join him.

I had barely time to say good-bye to the drops of water I had been talking to, when they joined the big water, and plunged down a hundred and sixty-four feet upon the rocks below.

The spray rose up high above the cataract, and looking back over the brink of the Falls seemed to beckon and encourage the waters onward to take their awful leap.

I stood some time by the little rivulet, and as its waters came and went, I could not help saying; Gentle, harmless raindrops, stay here on this pretty island, and do not rush on to destruction. But they rippled out sweetly: No, no, we must hurry on, for we have many miles yet to travel. We fear nothing, for we are held in the hollow of His hand who called us into being.

I turned and walked away, thinking what wonders may be performed, for good or evil, by united effort.

Remedies and Receipts.

GINGER SNAPS.—Two and one-half pounds flour, half pound butter, half pound sugar, one pint molasses, one teaspoonful soda, one tablespoonful ginger. Bake thin.

TO DRIVE AWAY ANTS.—The little red ants will leave a place where sea sand is sprinkled, or where oyster shells are laid. Scatter sprigs of wormwood where *black* ants are troublesome.

TO PURIFY A WELL.—When a well is cleaned out, if any offensive substance is found in it, have the bottom sprinkled with two or three quarts of quicklime.

GRAPE JAM.—The common wild grape is best for this. Boil soft, and strain the grapes through a sieve—a pound of sugar to a pound of pulp. Boil it twenty minutes, stirring often.

TO DESTROY GRASS IN GRAVEL WALKS.—Scatter the cheapest coarse salt along the edges, and wherever the grass is springing up. Even the Canada thistle can be destroyed by cutting the stalks close to the ground, and putting salt on them.

LEMON PIE.—Juice and grated rind of one lemon, one teacupful sugar, two eggs, one cracker, half cup milk. Pound the cracker fine, mix yolks well beaten, sugar and lemon together. Bake in a good crust. Have ready the whites beaten to a stiff froth, with one tablespoonful of sugar, and spread over the top of your pie; put it in the oven, and brown it a few minutes.

NEVER enter a sick-room in a state of perspiration, as the moment you become cool your pores absorb. Do not approach contagious disease with an empty stomach, nor sit between the sick and the fire, because the heat attracts the vapor. Preventives are preferable to pills or powders.

CREAM PIE.—Place a pint of milk where it will heat. Then beat together one cup of white sugar and a half cup of flour, with two eggs, and stir it into the milk when it is nearly boiling. Stir rapidly until it is thoroughly cooked; add essence of lemon, and pour upon the crust, which should be baked before the cream is put in. This will make two pies. If you wish it extra, make a frosting of the whites of the eggs, and three tablespoonfuls of sugar. Spread this evenly over the pies, and set them again in the oven and brown slightly.

FLOAT.—The way I make float is this: I take a half gallon of new milk, put it on the stove and bring it to a boil; then add two tablespoonfuls of white sugar, and set it off and let it cool. Take the yolks of six eggs, beat them well and stir into the milk, place it again upon the stove and let it boil up a moment, then remove it and pour into your dish. Now beat the whites of the six eggs to a froth, and pour the fourth of a pint of hot water over them and put upon the top of the custard. Flavor and sweeten to taste.

A RECIPE WORTH A THOUSAND DOLLARS.—The Ohio *Cultivator* says the following recipe is worth $1,000 to every housekeeper: Take one pound of sal soda and a half pound of unslacked lime, and put them in a gallon of water, boil twenty minutes, let it stand till cool, then drain off and put in a small jug or jar, soak your dirty clothes over night, or until they are wet through, then ring them and put on plenty of soap, and in one boiler of clothes, well covered with water, add one teacupful of the washing fluid; boil half an hour briskly, then wash them thoroughly with suds, rinse, and your clothes will look better than by the old way of washing twice before boiling. This is an invaluable recipe, and every poor, tired woman should try it.

Scraps of Humor.

AT what time was Adam married?—upon his wedding Eve.

JOHN BEAR and Barbara Wolf were married at New Albany. There's trouble a *bruin!*

"OFF she goes," said a lady, speaking of the train as it was starting. "You have mistaken the gender, madam," a man said; "this is a mail train."

"WOULDN'T you call this the calf of a leg?" asked Bob, pointing to one of his nether limbs. "No," replied Pat, "I should say it was the leg of a calf."

JOSH BILLINGS says: "When a young man ain't good for anything else, I like tew see him carry a gold-headed cane. If he can't buy a cane, let him part his hair in the middle."

A NEW ORLEANS WIDOW of a week was wooed by an impulsive suitor, who, after obtaining her consent to a marriage in a fortnight, borrowed ten dollars and deserted her. She told her tale to the recorder. "Well!" exclaimed the astonished official, "this is a little ahead of anything I ever heard of." "Yes, sir," replied the lady, "It does beat all: not that I care anything about the money, but I don't like being *fooled*."

A down east girl being bantered one day by some of her female friends in regard to her lover, who had the misfortune to have but one leg, replied: "Poo, I wouldn't have a man with two legs—they're too common."

Little Frank was taught he was made of dust, and as he stood by the window watching it as the wind was whirling it in eddies, he exclaimed, seriously, "Ma, thought the dust looked as though there was going to be another little boy made."

"Mother," I shouldn't be surprised if our Susan gets choked some day." "Why, my son?" "Because John Wipsy twisted his arms around her neck the other night, and if she had not kissed him to let her go, he would have strangled her."

Miss Polly Collins took up Robert Knowles for not fulfilling his promise to marry her. The gist of the evidence turned out thus: "I asked Polly if she would have me, and she answered, Yes; but I did not tell Polly I would have her." That made it bad for Polly.

A minister was on his way to church one Sabbath morning, and saw a boy on the river bank fishing. "My boy," said he, "don't you know that it is wicked to catch fish Sunday?" "Guess I han't sinned much yet," said the boy, without taking his eyes from the cork; "han't had a bite." Minister coughed and pushed on.

"Doctor," said an old lady the other day to her family physician, "Kin you tell me how it is that some folks are born dumb?" "Why, hem, certainly madam," replied the doctor, "It is owing to the fact that they come into the world without the power of speech." "La, me!" remarked the old lady; "now just see what it is to have a phisic edication. I've axed my old man more than a hundred times that ar same thing, and all that I could ever get out of him was, kase they is."

A lady of rural aspect entered a shop in the city of Erie, Pa, the other day, and asked to see some "mournin' stuff." The clerk, thinking to expedite a sale, inquired in what manner the deceased was related to her. "Well," she replied, "fact is, there ain't nobody dead as I knows on, but the doctor says my old man can't live more'n a week or so at furtherest, an' bein' as 'twas market day, and I was in town, I thought I'd better be gettin' the funeral fixings, and make 'em up, 'cause it's a real bother to get 'em made when there is dead folks in the house, an' I hate to borrow."

Little Freddy, who has been very piously educated, came to his mother one evening and said, "Mother, what is a 'gone sucker?'" "You mustn't ask such questions, Freddy." "But, mamma, I want to know what a 'gone sucker' is." "Freddy, I tell you not to ask me again." Freddy, however, could not be put off, and still insisted in pressing his inquiries, whereupon "mamma" became indignant, and ordered him to bed, and as a punishment Freddy had to say his prayers by himself, instead of on mother's lap as usual. So Freddy prays, "God bless papa and mamma and baby, but as for me, I'se been a bad boy, and *I guess I'm a 'gone sucker.'*"

A Western farmer advertises a fugacious wife, who, he says. "has left him just as his summer's work is beginning, notwithstanding he has had the expense of wintering her."

Miscellaneous.

A former sign in Pittsfield, Mass., "Coblin dun heer" has been changed to read "Maid and repared."

If the devil should lose his tail, where would he go to get another one? Where they re-tail bad spirits.

A boy of thirteen has been sent to prison for a week, in France, for a seditious hurrah in the presence of the Empress.

The Bridgeport City Directory, just published, gives a list of 6150 names, indicating a population of about 24,000.

The name of the engineer who run the first "Iron Horse" over the Pacific Railroad is George E. Booth, of Seymour, Conn.

There are over *forty thousand* "boss" shoemakers in London alone, while in England over a quarter of a million of men and women are engaged in shoemaking.

The latest from the Boston Jubilee is the intelligence that an individual, yesterday, applied there for a situation to "shovel rosin on to the fiddle-bows."

We noticed a fellow yesterday wearing a very large ring with a brilliant setting; but he wore it in rather a queer place for a ring—around his eye.—*Houston Tel.*

A Printer's apprentice says that at the office they charge him with all the *pi* they do find, and at the house they charge him with all they don't find. He does not understand that kind of logic.

Solvent for Old Putty and Paint.—Soft soap mixed with a solution of potash or caustic soda, or pearlash and slaked lime mixed with sufficient water to form a paste. Either may be laid on with a brush or rag, and when left for some hours will render its removal easy.

A Hint.—To all persons who use kerosene lamps, we would mention that if the wicks are soaked in strong vinegar for twenty-four hours, and thoroughly dried before being used, all smoke will be avoided, the wicks will last twice as long, and increased brilliancy will be obtained. Housekeepers can easily test this matter.

Worth Knowing.—A correspondent of the *Maine Farmer* says; "Many a housewife may be glad to know, when she has a piece of fresh meat she wishes to keep a few days, that it can be successfully done by placing it in a dish and covering it with milk. Sour milk or buttermilk will do as well. I have practiced the plan for years."

A girl keeper of a toll-gate in England was asked by a swell velocipedist, who thought to chaff her, how much he had to pay. "That, sir," replied she, "depends upon whether you ride through the gate, or whether you get off your dandy horse and drag it through; because in that case every two-wheeled vehicle drawn by a horse or an ass pays three-pence."

Thy Mother.—Thy mother is thy best earthly friend. The world may forget thee—thy mother never; the world may persecute thee while living, and when dead plant the ivy and the nightshade of slander upon thy grassless grave, but thy mother will love and cherish thee while living, and if she survives thee, will weep for thee when dead, such tears, none but a mother knows how to weep. Love thy mother.

Boiled Paint Skins.—This is a very economical way of obtaining a cheap and durable color for all outside work. All the cleanings and scrapings of the buckets, and wipings out of the brushes, instead of being wasted on the wall, may be saved and boiled up in oil. The hardest and driest paint skins, putty, etc., in this way are softened and rendered available.—*The Practical Painter.*

All is Vanity.—No doubt many of our readers have often seen the time when they could fully agree with Hans Breitman in saying:

> "Oh, vot ish all dis eartly pliss?
> Oh, vot ish man's soocksess?
> Oh, vot ish various kinds of dings?
> Und vot ish habbiness?
>
> Ve find in a pank note in de shtreedt,
> Next dings der pank is preak;
> Ve folls, und knocks our outsides in,
> Ven ve a ten shtrike make."

The Council Bluff (Iowa) *Nonpariel* says that when the "good time coming" comes, announcements like the following will be frequent; "Died, in the thirty-fifth year of his age, Mr. John Smith, husband of the Hon. Jane Smith, at her residence in Nashua, this morning at six o'clock. Mr. Smith was a meek and quiet husband, beloved for the graces of a cultivated and trained nature. He excelled in the domestic virtues; as a cook he was surpassed by few; as a nurse he was equalled by none."

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted.—A young man who has worked at a fire for three years, would like to go under instructions for one year. Address Fred. A. De Voe, Brooklyn Post Office, N. Y.

Wanted—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

Wanted—A situation, under instructions, at Carriage Wood-work. Address J. G. Marple, Spring Garden, Penna.

Wanted—By a Body-Maker, who understands his business, and is a good draftsman, a position as superintendent of a carriage manufactory. The best of references given. Address C. B. Darson, Newark, N. J.

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Felton, Rau & Sibley, Philadelphia, Pa.
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O. W. Swift, New Haven, Conn.
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Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, June 21, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.

" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 40 per cent. discount.

Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.

Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.: No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.

Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25: No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.

" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25: 1¼, $5: 1⅜, $7: 1½, $8.50

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.

" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.

" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11: 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50: 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.

" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 40 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 62c.; ¾, 76c.; ⅞, $1; 1 inch, $1.30.

Buckram, per yard, 16 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.

" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.

Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30: English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.

Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 33c.; 6-4, 40c.; drilling, 5-4, 46c.: 48 inch, 48c.; 6-4; 62c.; duck, 5-4, 63c.; 50 inch, 68c.; 6-4, 75c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 60c.; 48 inch, 62c.; flock drill, 48 inch, 95c.; do., muslin, 85c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 15c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.58; New York pat., ⅝, $1.12; ¾, $1.20.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.

" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 14c.; do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 26c. to 28c.; do., No. 2, 24c.; enam. trimming, 24c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

" spoke ten. machine, each, sm., $15; large, $25.

" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30: No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.: do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.

Screws, Eagle, gimlet point, wood. 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.

" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.

" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.

" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

" Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.

" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $2.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2 15; 1⅛, $2.50; 1¼, 2.65.

" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.

" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.

" ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.

" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6

" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.

Slat irons, wrought, N. Y. pat., per doz. sets, 4bows, $12

" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.

" plated, short, $1.20; 1 long iron, $1.37.

" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.

" Bright tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.

" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.20; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.

" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.

" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.

" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30: No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb., No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.

" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

" white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.

" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in. diameter, $2 to $2.25 per set,

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.

" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00: finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.40; deep, $1.50; Ger. gotn. pale, $1.50; deep, $1.30; Chinese, $1.30; Trieste, $1.25; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 15c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 69c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.

BRUSHES.

Paint—0, 65c.; 00. 75c.; 000, 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, the balance of Volume, two (2) months for twenty-five (25 cents. DISPLAYED TYPE fifty (50) cents for each name. *Those marked with an asterisk see advertisement in the Journal.*

Axle Gauges.

*HARPER, HENRY, (Harper's Patent,) Butler, Ill.
JAMES JUDD, Agent, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

MOSSER & CAMP, Allentown, Pa.
*SAUNDERS, M., Hastings, on the Hudson, N. Y.
ATWATER, H., Agent. 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winstead, Conn.

Carriage Body Manufacturers.

* HOLDSWORTH, WM., Chester, Pa.
NORCROSS, H. S., 1712 Coates street, Phila., Pa.
STEPHEN PERKINS, Rahway, N. J.

Carriage Bolt Manufacturers.

HAYDEN, A. & M. 22d, above Vine street, Phila., Pa.
***SCOTT & DAY,** 38 North Third st., Phila., Pa.
***SHIELDS, WM.,** Girard Bolt Works, 23d above Race st., Philada., Pa.
SIMPSON & JACKSON, 22d and Filbert streets, Phila., Pa.
***SKELLEY, T.,** Philadelphia Carriage Bolt Works, 24th, below Callowhill st., Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.
HUBLEY, ADAMS & CO., 5 Market st., Pittsburg, Pa.

Carriage Castings.

***FITZGERALD & FLAGG,** 218 North Third street, Phila., Pa.

Carriage Draftsmen.

*MULLER, A., 142 Second street, New York City.

Carriage Mounting Manufacturers.

*BURWELL, WM., 236 Arch street, Phila., Pa.

Carriage Wheels.

*BROWN, S. N. & CO., Dayton, O.
LOUCKS, WM., 825 N. Thirteenth st., Philadelphia.

Coach Hardware and Trimmings.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
McNALLY & McMULLEN, 39 S. Charles st., do do
*PORTER, R. B. & SON, 78 West Pratt st., do do
SHARE, GEO. K. & CO., Indianapolis, Ind.
ATWATER, H., 1625 Market st., Phila.
*BURWELL, WM., 236 Arch st., Phila., Pa.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
FORT, GEO. E., 147 North Third st., do
KEIM, GEO. DEB., 162 N. Third st., do
***ROUSE, J. G. & CO.,** 4th & Arch sts., Phila.
***SCOTT & DAY,** 38 North Third st. do
SNYDER, W. & A. J., 115 North Third st., do
STOTESBURY & KENNEDY, 56 North Third st., Phila., Pa.
MOORE & CATTELL, Salem, N. J.
SMITH, E. B. & CO., 77 Warren st., Trenton, N. J.
KIRK, HAMMOND & CO., West Chester, Pa.

Carriage Wood-work.

*BROWN, S. N. & CO., Dayton, O.
OLMSTEAD & JONES, Syracuse, N. Y.

Coachmakers' Tools.

UNDERHILL BROS., 71 Haverhill st., Boston, Mass.
WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

Coach Lamps.

CAREY & LIEBISCH, 234 Carter st., Phila., Pa.

Felloe and Spoke Manufacturers.

***HOOPES, BRO. & DARLINGTON,** W. Chester, Pa.

Glue and Curled Hair.

SPRAGUE, F., Dayton, O.
BIDWELL, DANIEL, 254 Pearl st., New York City.
LEONARD, AMASA, 59th st., N. River, N. York City.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
McNALLY & McMULLEN, 39 S. Charles st., do do
*PORTER, R. B. & SON, 78 W. Pratt st., do do
*BROWN, S. N. & CO., Dayton, O.
SHARE, GEO. K. & CO., Indianapolis, Ind.
***SCOTT & DAY,** 38 North Third st., Phila., Pa.

Iron Merchants.

WEYER, J. S., Madison, Ind.
HOPKINS, H. & J., 138 Reade st., New York City.
ATWATER, H., 1625 Market st., Phila.
POTTS, H. T., 215 North Second st., Phila. Pa.

Ivory and Horn Turners.

HACKERT, JULIUS, 171 Suffolk st,, New York City.
ATWATER, H., Agent, 1625 Market st., Philo.

Paint and Varnish Brushes.

***FELTON, RAU & SIBLEY,** 136 North Fourth st., Phila., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.
***THUM, CHAS. D.,** 150 N. 3d st., do

Permanent Wood Filling.

VALENTINE & CO., (Piotrowsky's Patent,) 32 Kilby st., Boston, Mass.

Rubber Enameled Carriage Cloth.

***ODORLESS RUBBER CO.,** 19 Park Place, New York City.

Silver Platers.

*BURWELL, WM., 236 Arch st., Phila., Pa.

Paints, Oils and Varnish.

TRUMAN, DUNHAM & CO., 118 Superior st., Cleveland.
BIDWELL, DANIEL, 254 Pearl st., New York City.
***FELTON, RAU & SIBLEY,** 136 North Fourth st. Phila., Pa.
LUCAS, JOHN & CO , 141 N. 4th st. Phila., Pa.
McKNIGHT & CO., 22d and Race streets, Phila., Pa.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., do

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

CROWELL, DAVID, Rahway, N. J.
NEWELL BROTHERS, Owego, New York.
***HOOPES, BRO. & DARLINGTON,** W. Chester, Pa.

Spring Manufacturers.

*SPRING PERCH CO., John st., Bridgeport, Conn.
KILLINGWORTH MANUF'G CO., Clinton, Conn.
ATWATER, H., Agent, 1625 Market st., Phila.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.
RAHWAY SPRING AND BOLT WORKS, Rahway, N.J.

Tack and Lining Nail Manufacturers.

DUNBAR, HOBART & WHIDDIN, S. Abington, Mass.

Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

***ATKINSON, W. & CO.,** 270 Broadway, New York.
MOLLER, CHAS., (sole Agent for U. S.,) 35 Maiden lane, New York City.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

VALENTINE & CO., 32 Kilby st., Boston, Mass.
COLGATE & CO.. 401 Illinois st., Chicago, Ill.
FITZGERALD, J. D., 315 Mulberry st., Newark, N. J.
***MINETT & CO.,** 60 Pearl st., New York City; 7 South Tenth st., Phila., Pa.
PARKER & GILLESPIE, 228 Pearl st., New York City.
***SMITH, EDWARD & CO.,** 161 William st., N.Y.
***FELTON, RAU & SIBLEY,** 136 North Fourth st., Phila., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.

White Lead and Color Works.

BOYLAN & TUERS, 81 Maiden lane, New York City.
TIEMANN, D. F. & CO. 240 Pearl st., New York City.
McKNIGHT & CO., 22d and Race sts., Phila., Pa.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.

AYRES, LIPPINCOTT & CO.,

WHOLESALE DEALERS IN

CARRIAGE MATERIALS AND SADDLERY HARDWARE,

No. 49 NORTH THIRD STREET,

PHILADELPHIA.

We invite the attention of Manufacturers and Dealers to our complete stock of goods in the Carriage line, which we propose to sell at the lowest market rates.

Our facilities in the purchase of goods, in large lines, often enables us to supply them below Dealers and Manufacturers **PUBLISHED** prices.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. IV.—NO. 11. AUGUST, 1869. $3.00 PER ANNUM Always in Advance.

SPECIAL NOTICE.

EXPIRATION NOTICES TO SUBSCRIBERS OF THE JOURNAL WILL HEREAFTER BE GIVEN BY A BLUE X ON WRAPPER, OR COVER, NEXT THE NAME. SHOULD ANY MISTAKES OCCUR PLEASE NOTIFY US AT ONCE. OUR RULE IS TO DISCONTINUE UNLESS INFORMED TO THE CONTRARY.

BUSINESS PROSPECTS.

At a time like the present, when business of almost every kind is dull, and the tendency is toward a still greater depression, it is fitting that we cast about us, and prepare for whatever may be likely to follow. The trade this season has been far from satisfactory, and the majority of carriage builders are already anxiously looking toward the coming winter, and dreading its weary months of dullness. Not a few manufacturers have a heavy stock of finished work on hand, and cannot, with safety, add much thereto. Should the fall trade afford no relief, journeyman may count certainly on a trying winter. The workingmen, if they are wise, will look sharply after their expenses, and see to it that no money is foolishly spent during this summer, but rather let them deny themselves and prepare for a dull winter.

Carriage builders in every section of the country have been disappointed in the spring trade, and are discharging hands at a time when they should reasonably expect lively sales. Some shops have had a heavy run of repairing, and kept their hands at work so long as it lasted, but even that line of work has fallen off, which necessitates the discharge of a great many hands.

And this dullness among carriage-makers has not been confined to any particular locality. At New York, Chicago, St. Louis, Louisville and other places, we hear the same complaints. At New Haven, Cincinnati and Indianapolis the trade has probably been better than elsewhere, yet not fully up to the expectations of dealers. Buyers are hard to please, and, taking advantage of the times, offer very low prices for the best class of work.

There are those who have a heavy stock on hand, and thus far have refused to sell at prices which would be ruinous to them. Tremblingly they are holding on in the hope of working off their finished work at better rates before winter sets in. We hope they may not be disappointed, but cannot see what they base their hopes upon.

As, in all probability, the prices will rule much lower next spring, it may be found more profitable to sell now a little below the figures set than to carry the work over until spring.

Carriages depreciate rapidly. The styles are continually changing, and it behooves the builder to be ever on the alert, working off the old stock, and being ready in the early spring with a fresh lot of vehicles, suited to the wants of his customers, of the latest and most attractive patterns.

We can discover no cause for being greatly alarmed. We are not of that number who prophesy utter ruin to the whole country as being but a short distance ahead of us; nor would we seek to lay the whole blame at the doors of those who are high in authority over us.

A stringent money market, over-production, high rates of living, speculation, the effects of the late war, and the reckless extravagance of the whole people, have each contributed their share toward the general stagnation.

We live, eat, drink and dress extravagantly, and may expect to bring on ourselves hard times as the reward.

But, with our vast territory, the variety and extent of our products, our mineral wealth, and the industry of the millions who compose our nation, there certainly need be no just cause for the dark and gloomy pictures that are being painted by many in our midst.

Read all the advertisements in the JOURNAL, and see who are the live men in business.

Advertisements must be recieved by the 15th of the month to insure insertion.

VOLUME V.

One more number will close the present volume, (IV.) The prospectus of Vol. V will be found on extra leaf back of JOURNAL, and we hope all who have patronized us the past year will continue their subscriptions and use their influence among their friends. Our terms are so low that the JOURNAL is within the reach of all, however straightened may be their circumstances. To the apprentice it has been of incalculable benefit, and to those advanced in the art of coach-making doubtless the experience and views of others have proved beneficial. We make no claim to knowing more than others, but by collecting the ideas and experience of the best mechanics, in all sections of the country, the JOURNAL is, according to the many letters of commendation we are receiving, a welcome visitor to every home circle and workshop, where it has been monthly appearing.

Our co-editors, in the different departments, are men of ability, and fully competent to direct their departments to the interest of their several branches.

The present volume is a true type of the succeeding one. Our march is onward, and our efforts shall be to make each succeeding number better than the one that precedes it.

We ask our friends to lend us material aid by sending in as large lists as possible, and, to do this effectually, commence at once, and ere the September number shall have reached its destination, we hope to have a goodly number recorded in our new mail book. Shall our expectations be met?

HOT WEATHER.

Whatever complaints we may have laid in heretofore about the backwardness of Spring, the rainy weather, and the chilly atmosphere, we may *now* safely write down the weather as *very hot*.

It is *hot* in the morning, *hot* at noon, and *hot* at night, and then, again, it is *hot* between-times.

Heat, at present, is no respecter of persons or places. It is *hot* in the office, *hot* in the workshop, and *smoking* hot in the harvest fields. The sun is a very early riser, and begins the work of baking us long before we have decided to rise in the morning. We retire at night, and *swelter* in a *hot* room, and rise in the morning weak and wilted.

At breakfast *hot* coffee has no attractions, and, as for relishing a piece of *hot* beef-steak, that is out of all reason. O, ain't it hot? It is scorching hot. Here we sit in the office, with coat, vest, collar and neck-tie stripped off, the room darkened, and the floor wet down, trying to make up the Journal; but we find it a difficult task; our thoughts *will* wander off toward Atlantic City or Long Branch, where the favored ones of earth are strolling along the shore, or bathing in old Ocean.

They say, too, that President Grant is down at Long Branch. Now, what right has *he* to stroll off *so far* from Washington, and leave this great nation at the mercy of all *we hot heads?*

The thermometer indicates ninety odd degrees; the mercury has certainly concluded to explore the very top of its prison cell. Go on, we say; let "Excelsior" be your motto; as for us, we shall rush down the back stairway, and take a cold-air bath in the cellar. Whew, but it is hot!

NOTES BY THE WAY.

(Continued from page 132.)

We remained over night at the Falls Village, and at 6 A. M. the following morning started for Buffalo. On the route we noticed that Niagara river was filled with floating ice. An occasional breeze from that direction was not suggestive of pic-nics, May flowers, or rambles in the wild old woods. We reached the city at 7.15 A. M., and were not slow in our movements toward a hotel and the breakfast table.

The morning ride had sharpened up our appetite to an unprofitable degree to suit the landlord, we suppose, but we didn't care a fig for that. We think there is no better appetizer than a few hours' ride on any of our railroads, for they are so rough that a good square meal will be jolted down into nothingness in a very short space of time.

Breakfast over we consulted the city directory, studied the location of the principal streets, took down the names of carriage and wagon-makers, (the directories always mix them,) and sallied forth to make the acquaintance of the craft.

A walk out Seneca street, to No. 780, disclosed the fact that among several names there was but *one* regular carriage firm, viz: Buffman & Co. The remainder were wagon and repair shops, kept by Germans. The city cannot boast of more than five or six shops where carriages are built. Harvey & Wallace carry on the most extensively, doing first-class work. Godwin, Dilfer & Werner, and Braids, each do a light business.

We accepted an invitation to tea from friend T. J. Stines, after which we took a stroll through the principal avenues. Palatial dwellings, with beautiful surroundings, shade trees, and excellent roads, contribute to make these streets all that could be desired. Delaware, Franklin, Pearl and Niagara are the principal avenues on the west side. Buffalo contains one hundred thousand inhabitants, and is one of the greatest grain ports of the world. Leaving Buffalo, May 13th, we pushed on toward Erie, Pa., from thence we visited Girard, Fairview, Conneautville and Greenville, in Pennsylvania, crossed into Ohio, calling at Warren, Ravenna, Talmadge, Akron and Cleveland. This is a beautiful section of country to travel through, and the towns visited are wide awake places. Akron is growing rapidly; it wears the lively, bustling appearance of an energetic and money-making community. Cleveland is beautifully situated on Lake Erie, and her citizens may be justly proud of their city. The carriage business is an important branch of manufacture. We canvassed the city thoroughly, and took several names.

Butter & Harm, Willows & Vaughn, Hoffman & Geib, and others, pay some attention to carriage making. Lowman & Worden do a heavy business.

From Cleveland we visited Elyria, from thence again visited the lake shore at the pleasant city of Sandusky. On the 25th of May we took our departure, and after stopping at Clyde and Fremont, called in to look upon the good people of Toledo. Here we met several old friends, with whom we had been well acquainted in former years. At Cooney & Co.'s shop we met our old friend and brother painter, Mr. Stone. It is cheering to the traveler to meet a familiar face occasionally, and we think our labors were lightened considerably by a hearty shaking of the hands of old Cincinnatians whom we met.

The carriage business in Toledo is not carried on to that extent which cities more favorably situated might demand; still, there are the best of mechanics at work, and their products in light work will compare favorably with the best builders in the State. Cooney & Co., Stebbins & Carter, and L. B. Gifford are the principal builders.

We spent a very pleasant evening in the company of Mr. Stone and others, and on the morning of the 27th bade them all a reluctant good-bye. "All aboard," and we were soon speeding on toward Monroe, Mich. We followed the Michigan Southern, and Northern Indiana Railroads to Chicago, stopping on the way at Adrian, Hudson and Coldwater, Mich., and Elkhart, Goshen and South Bend, Indiana.

Taking the early train, which demanded our presence at 7.15 A. M., we headed toward the wonder of the West, Chicago. At Elkhart we heard the welcome sound of the gong calling we poor jolted mortals to breakfast. "Elkhart, twenty minutes for breakfast." The notes of the gong died away amid the rattle of plates, knives and forks, and the hurried orders of the waiters.

The feast was speedily ended, and in going out we were politely notified to deposit seventy-five cents each as a slight token of our regard.

We arrived at Chicago at 8.45 P. M., amid the bustle of trains going and coming. Nine railroads centreing here, there are trains continually in motion, which remind one more of an approach to New York City than to a Western town only forty years old. C. W. V.

GLEANINGS.

"Rochester, N. Y., has risen from a wilderness in less than half a century." The first white child born in Rochester is still living near by, in the prime of manhood. Genesee Falls are well worthy a visit. * * Syracuse, N. Y., is noted for State Conventions and salt boilers. * * Erie, Pa., is noted for what? Well, we should say, for the number of emigrants that are continually being dropped off there to await further transportation. The emigrants crowd their way into the streets, squat down along the side-walks, and stroll through the town until train time. One sees the infant, the youth, the middle-aged and old, all huddled together like cattle. The majority are Germans, who are bound for the far West. * * Girard, Pa., a beautiful village, situated on the Lake Shore Road, beyond Erie, is the showmen's head-quarters. Here Dan Rice lives in princely style, and is noted for his liberality toward every project to beautify the place, and make it a quiet and moral village. * * At the hotels throughout the State of New York you must eat your pie with a fork, which we know is very polite, but outrageously inconvenient. Give *us* the *knife* to cut with; we were taught that it was designed for that purpose. * * Commend us to the New York Central Railroad for comfort, convenience, free depots and low fares. * * At Lyons, N. Y., May 1st, the jury, in a case of breach of promise, gave the plaintiff, (a lady of eighteen summers,) damages to the amount of $1,000, being one-third of the worldly goods owned by the defendant.

CARRIAGE DRAWINGS.

We are pleased to notice the recovery of Mr. Adolphus Muller, 142 Second Street, New York City, so long and favorably known to the carriage trade as a practical carriage designer. Having for several years past been afflicted with partial blindness, coach-makers have experienced difficulty in getting colored drawings of the various styles, and it is with pleasure we announce that he is now prepared to fill all orders promptly, and in a manner not to be excelled.

Post, Herkner & Co., are the general agents for the Odorless Rubber Co. See their advertisement.

NEW ADVERTISEMENTS.

Our readers will pardon us for referring again to the success that has attended our efforts to place before them the advertisements of the energetic business men of the country, manufacturing and dealing in carriage materials. By comparing the present with the first number of Vol. IV, an idea can be formed of our advancement, twelve pages having been added since the volume commenced; and we hope to continue increasing our pages until we secure every reliable house in the country. Our terms are moderate, considering our large circulation, and we have but one price for the same amount of space; in other words, we never vary from our regular rates.

We have a few more new candidates for public favor, and would ask special attention to their claims on your patronage, not forgetting, of course, those who have been before you during the last ten months, and some of them much longer, even from the commencement of our enterprise.

Topliff & Ely, Elyria, Ohio, manufacturers of Wheels, Hubs, Spokes, &c., whose card may be found in our advertising colums, may be relied on as gentlemen worthy a share of your patronage. Having called recently at their place of business, in Elyria, we can testify that they are straight forward business men. They manufacture Carriages, and are well acquainted with the wants of carriage makers.

Isaac M. Inman, dealer in Carriage Transfer Ornaments, at Jersey City, New Jersey, will send sample designs gratis. As this new mode of ornamenting has nearly or quite superseded handwork, those interested should endeavor to obtain the best in the market. Give Mr. Inman a trial. See his directions on outside of back cover.

Nickson's Improved Self-acting Spring Joint, Akron, Ohio. By reference to their large illustrated advertisement, in back of the Journal, a very correct idea may be obtained of their Patent Joint. We have not been favored with a sight of a set of the joints ready for use, but should think them worthy of the attention of carriage makers. With this make of joint, a top may be thrown back and held automatically in any desired position.

Zwick, Pinneo & Daniels, Dayton, Ohio, manufacturers of Second-growth Hickory Spokes, Wheels, Hubs, Felloes, &c., carry on an extensive business, and are an old and reliable firm. The reputation already established, by the choice timber sent out from that enterprising city, will insure a continuance of trade, and doubtless, add many new customers through judicious advertising.

Nixon & Wigley, manufacturers of Coach Lamps, 39 North Seventh street, Phila., are prepared to furnish articles in their line of the latest patterns. Give them a trial.

Carey & Post, 234 Carter street, below Third street, Phila., manufacturers of Coach Lamps, Door Handles, and Mountings of all kinds adapted to carriage work, solicit a share of patronage through the advertising columns of the Journal. They give especial attention to silver plating and oroide work. Being practical workmen, they are determined to sustain the enviable reputation already acquired in this line by Philadelphia mechanics. Orders will be promptly filled, and all work warranted to be of the best material and latest styles.

Church & Watts, North East, Erie Co., Pa., manufacturers of Spokes, &c., whose advertisement will be found in this number of the Journal, offer their goods at a surprisingly low figure. They did not favor us with samples of their spokes, therefore we cannot speak positively as to the quality of them. We can do no more than call attention to their price list, leaving those who choose to order from them to decide as to the quality. Judging from the slight acquaintance we have with this firm, we are led to believe that they mean to do all they promise, and as they will look for duplicate orders, their own interests should induce them to furnish material of a grade second to none.

Fitzgerald & Flagg, exclusive manufacturers of the "Mellinger Patent Jump-Seat Irons," 218 North Third Street, Phila., are prepared to fill orders for the same, and would direct the attention of the trade, by their advertisement, to the superiority of these fastenings over any that have preceded them. They claim for these irons that they are free from the objections incident to those heretofore in use, such as lateral or side motion, unsteadiness and rattling. We have seen the irons attached and the seats in working order, and can say, without hesitation, they are superior to any that have previously been brought to our notice. The legs or supports are inserted into sockets, which admit of only sufficient play to allow the seats to move forward and back. The bearings are firm and steady. Examine the cuts accompanying their advertisement.

Wakefield's Patent Axle-box, Minneapolis, Minn., is quite a novel invention, and is intended to secure the box in the hub without wedging. It has two beveled flanges, one cast solid at the back end of box, the other has a corresponding beveled nut flange, a screw-thread being cut on the end of the box to receive it. Drawings will be given in our next issue, which will give a more perfect idea of this improvement. Read their advertisement very carefully.

Wm. & Harvey Rowland, No. 948 Beach street, Phila., would, through their advertisement in the Journal, call attention to their make of Springs and Tire Steel. It is their purpose not to be surpassed in the manufacture of goods in their line. Having had a large experience, those interested may be sure of obtaining good material. ☞ See their advertisement.

J. Johnson's Patent Bolt and Rivet Cutter, an indispensable tool, and should be found in every carriage shop. He claims that all the bolts on a carriage may be trimmed off smoothly in FIVE MINUTES. It makes a smooth and level surface, and can be applied in any position. See drawing of the cutter in the back of this number, also prices for sizes Nos. 1 and 2.

M. Lines, Varnishes, Fourth above Arch, Phila., has lately moved into his new store, and given to his place of business quite a genteel appearance by improvements, which will not fail to attract the attention of passers by. He claims to furnish good stock, and desires a share of patronage. Read his advertisement.

HARLAND & SONS' ENGLISH VARNISH.

Carriage-makers have experienced a difficulty, at times, in obtaining this make of finishing varnish, and consequently were annoyed, and delayed in finishing up their work. Messrs. Felton, Rau & Sibley, Nos. 136, 138 and 140 North Fourth street, Philadelphia, are now importing it direct, and are prepared to fill all orders promptly.

Fashion Plates Explained.

PHILADELPHIA PHÆTON.

Plate No. 41.—A very pretty style of phæton, which will doubtless be appreciated by those who are ever seeking after variety. The side panels may be molded off, as represented, or striped; we would prefer to see the job striped. The front seat, which has the narrow bearing, now so popular, is secured by plates of iron, which are screwed to the bottom of seat, and bolted through frame-work of seat and boot.

Dimensions.—Width of body to take 44 inch bows. Hubs: 7 by $4\frac{3}{8}$. Front band, $3\frac{1}{8}$; back band, $3\frac{3}{8}$. Spokes: $1\frac{1}{8}$. Tire: 1 by $\frac{1}{4}$ steel. Axles: $1\frac{1}{8}$ inch. Springs: $1\frac{1}{2}$ inch, 4 plates, 36 inches long. Wheels: 3 feet 6 inches and 4 feet. Track: 4 feet 10 inches.

Trimming.—Brown cloth.

Painting.—Body: seats and panels purple; panels cross striped with fine lines of canary color or light blue. Carriage part: black, with three fine lines purple. Face of spokes: gold.

EIGHT-SPRING LANDAU.

Plate No. 42.—It affords no small degree of satisfaction to be able to present another draft from the well-known firm of H. Killam & Co., New Haven, Connecticut. The Landau stands at the head in the line of heavy work, and is certainly the most attractive and stately in appearance among the styles denominated heavy.

Mr. E. C. Hildebrand, who kindly furnished the fine drawing of this vehicle, remarks, in explanation, that "this Landau is hung on eight springs. The iron perch has an improvement over the old mode of construction, viz: instead of running through from front to back axles, is hinged to the body in centre behind the object being to prevent the side motion of the body." The boot is of the latest pattern, being brought up sharp and light at the top.

Dimensions.—Body: 53 inches over all, with the usual turn-under. Mouldings; ½ inch deep, chamfered. Hubs: 8½ by 5½. Front and back bands: 3¾ inches. Spokes: 1 7-16. Tire: 1¼ by ⅜, steel. Axles: 1⅜. Back elliptic springs, 1¾ long, 5 plates. Front springs, same length. C springs: same number of plates and same width. Wheels: 3 feet 6 inches and 4 feet. Track: 5 feet.

Trimming.—Brown satin.

Painting.—Body: panels English purple lake. Carriage part: black, with broad line of lake, centered with white; distance lines of tan-color.

THE SACO.

Plate No. 43.—The pattern here shown has some of its lines similar to the Portland. It is round cornered, back and front. The body is to be striped, as shown, representing a shell, which gives a new and very attractive appearance.

Dimensions.—Width of seat: 30 inches. Sides: flared 2½, with swell. The running part of all sleighs should be light, and taken from the best of hickory. Size of runners for light sleigh: ¾ in. square. Beams: ¾ by 1 inch. In ironing off sleighs, it is useless to load them down with iron braces. Use straight stays, which are stiffer, placing them where the strain is greatest. Steel shoes. Track: 39 inches.

Trimming.—*Purple plush*, with *orange plush* cord.

THE ALASKA.

Plate No. 44.—A light two-seat sleigh, with O. G. back and round corners. This body can be built lighter than that of the Albany pattern, and cheaper. The front seat is secured by irons. See description of plate No. 41. The bracket front and original style of moulding on side give to this body somewhat of a change from anything that has preceded it.

Dimensions.—Width of body: 34 inches on seat. Sides: bevel 3 inches. Boot swelled in to obtain a narrow seat bearing. The size of the running part should be in accordance with the wants of customers, and the character of the roads over which the sleigh has to travel. For shoes use steel. Track: 39 inches.

Painting.—Seat and small panels: carmine. The remainder of the body a light Bismarck. Body: to be striped with ornamental broad lines, relieved with fine lines. Running part: black, striped with Bismarck and gold. There is a wide field for design in the painting of sleighs, and tastes are singular, judging from the colors we often see used. For a genteel sleigh, for which a good price has been paid, we think that dark colors for the ground work, and a reasonable amount of ornamental striping, is more in keeping than the light gaudy colors and excess of striping too often used.

A cheap cutter, which has been painted on one coat of lead, or wood filling, needs some extra work in the ornamental painting to hide defects.

Trimming.—Green plush.

JEROME WAGON.

Plate No. 45.—Among the various styles of buggy bodies that have been built of late years, the piano box has received a large share of public favor. The original patterns have been modified through the restless ingenuity of different draftsmen, still the general appearance remains, and, to-day, there is scarcely a builder throughout the country but what finds ready sale for the piano-box buggy. The Jerome wagon is of this class, with some features quite new and practical.

The top line of the body on side panel is dropped at the centre, sufficient to remove an appearance of stiffness; the edge relieved by a half diamond moulding passing around the body. The corners may be made either round or square, the latter form being again fashionable. Rocker: concave. It has a stick seat set on a skeleton riser.

Dimensions.—Width of body: on seat for full size, 30 inches. Concave rocker: 1½ inches thick. Back of body open.

Carriage-part,—Hubs: 6 by 3⅛. Back band 2½; front band, 2⅛. Spokes: ¾. Tire: ¾, No. 12 steel. Axles: ¾, steel. Springs: 1¼, 3 plates, 36 inches long, 9 inches open. Wheels: 4 feet, and 4 feet 8 inches.

Trimming.—Drab cassimere, with lead colored welt.

Painting.—Body: panels black, top margin and concave rocker wine color. Seat and riser, black. Seat skirt: silver bronze, striped black. Carriage-part: silver bronze, striped with fine lines of black.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,

Author of "Stray Steps," &c.

CHAPTER II.

> "Cease, rude Boreas, blustering railer,
> List, ye landsmen, all to me;
> Messmates, hear a brother sailor
> Sing the dangers of the sea."

With our minds fully made up for a long visit to the domains of old Neptune, we quietly packed our little traps in the shop; called on Mr. Edgeup, and surprised him by asking for what he owed us. "What do you mean, that you two are leaving; are you crazy, to quit a job in mid-winter?" "Nary crazy, sir; and we *are* going to leave this or any other shop where men's wages are reduced in winter. So settle up, if you please, as we are in a hurry." "Stay," said he; "you two men I need, and will give *you your full wages all winter.*" "Too late, sir; if you wanted us, you should have acted differently." He paid us, and I know that the lesson was good for some person—that person being old Edgeup.

We left him, and went for the naval rendezvous, No. — Cherry street, and inquired if any men were being shipped, and if he, the agent, knew what ship was getting ready to go into commission. He said yes, they wanted a few more ordinary seamen and landsmen to make up the crew of the Comansioux, ordered on a special cruise, and to report to the Commodore of the United States squadron at Yokohama, Japan. "That's *our* ship, Charley, my boy." "All right, Fred.; you do the cogitation, (he meant negotiation,) with him."

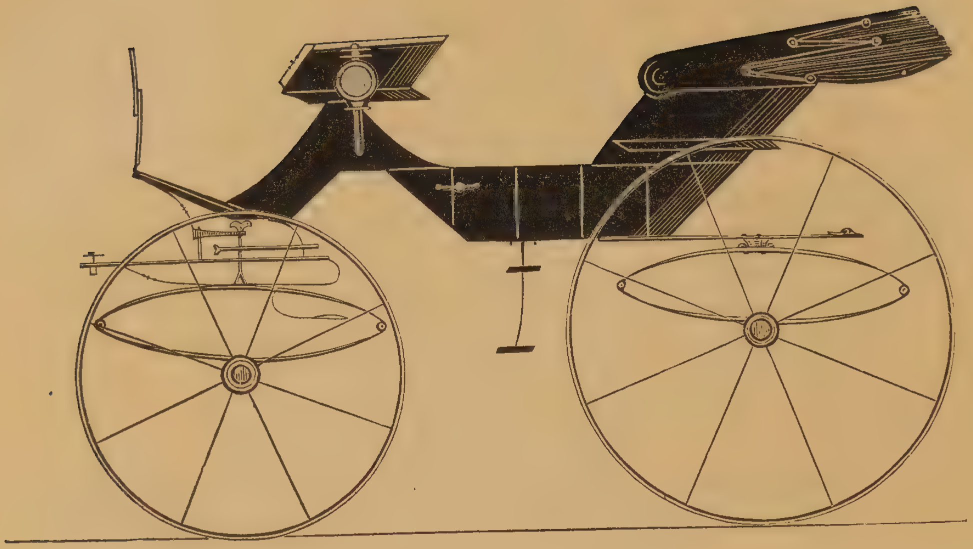
We shipped for three years, and were at once sent on board the receiving ship Vermont, and were, next day, drafted to the Comansioux. She had been completely overhauled and got ready for this cruise: newly rigged and painted, and she looked as bright as a new silver dollar. From her truck to keelson she was as perfect and tight a craft as ever sailor fell in love with. Her crew, when mustered on deck, were just as fine a looking set as ever trod a plank, and

> "She was a frigate stout and brave,
> As ever stemmed the dashing wave."

Soon the pilot came on board, and the shrill whistle of the boatswain piped "all hands unmoor ship," and under steam we dashed gallantly down the splendid bay of New York, toward the Horse-shoe, in the lower bay, where buoys are placed for the use of government ships, to regulate their compasses before going to sea. I would here attempt a description of this magnificent bay; but the space allowed me will not admit of anything foreign to the "subject." I must then, unwillingly, pass it by, and give all my attention to "subjects foreign."

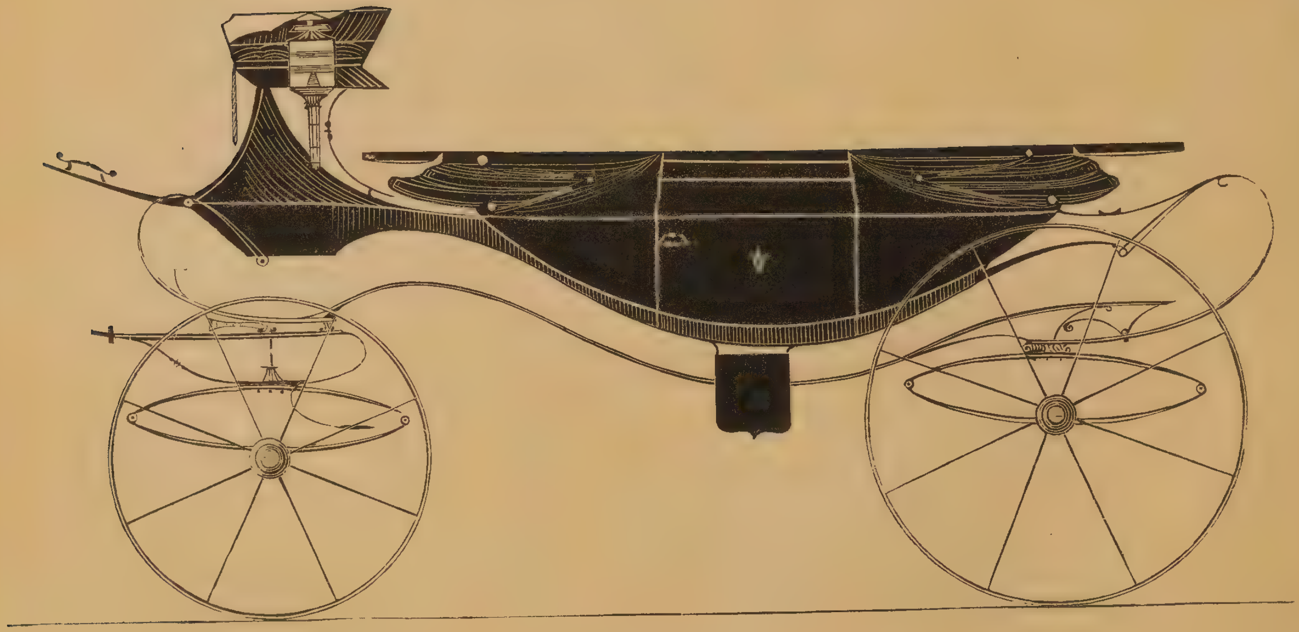
We were soon moored to the buoy's head and stern, and had just commenced swinging the ship, to arrange her compass, when a large field of floating ice came down the bay with the wind and tide. All saw it would foul us; but, before we could help ourselves, the ice had cut (or driven) us away from the mooring, and we drifted along with it. "All hands make sail," came from quarter deck, and soon, under the pressure of steam and sail, we drove through the ice, but had to go to sea without our compass being regulated. Outside Sandy Hook our pilot left us, and we were alone on the "deep rolling sea."

"Bank fires," was the next order, and steam was gradually reduced, until we were under sail alone. The crew were then assigned to watches and to their positions. Charley and I were in the starboard watch. The wind, which blew steadily from the nor'west, increased as night came on, and soon our "beauty" was making graceful courtesies to the crested waves, as they rolled past her, and was driving her head under as she fell off them. The officer of the deck soon had to order the head sails triced up. While doing so, one poor fellow in the night-heads lost his hold, as the ship plunged her bows into a great wave, and he was washed off. I saw him drop, and at once sang out, "Man overboard." My call was promptly answered by Lieut. Bross, the officer of the deck, giving the order "Drop the buoy," which was promptly and well done; one man springing to the trigger of the life buoy, and another to the port fire, the man on the port side sang out "Are you ready?" "All ready," is the answer, and the buoy is dropped, with its port fire burning brightly, and shining like a



PHILADELPHIA PHÆTON.

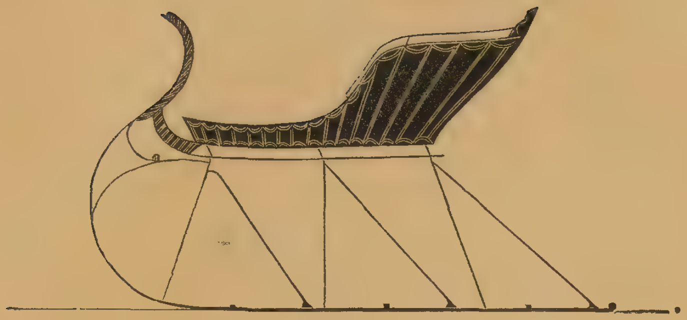
Plate No. 41.—Half-inch Scale. Explanation on Page 165.



LANDAU.

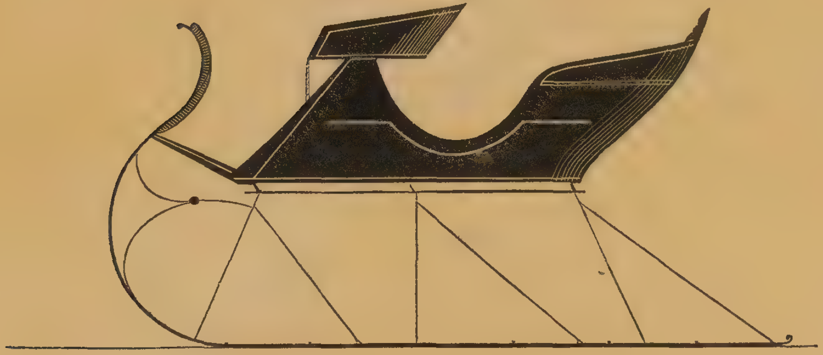
[Drawn by E. C. HILDEBRAND, New Haven, Conn.]

Plate No. 42.—Half-inch Scale. Explanation on Page 165.



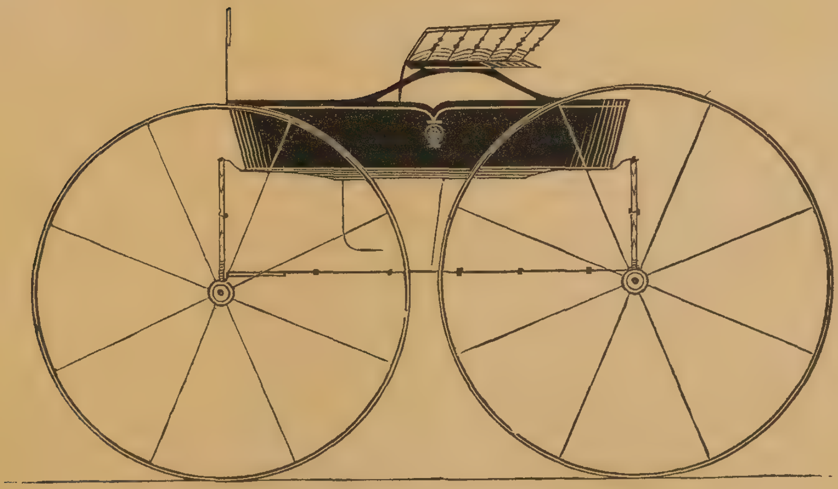
SACO.

Plate No. 43.—Half-inch Scale. Explanation on Page 166.



ALASKA.

Plate No. 44.—Half-inch Scale. Explanation on Page 166.



JEROME WAGON.

Plate No. 45.—Half-inch Scale. Explanation on Page 166.

star of hope for the poor soul in danger. "Helm down," roared the lieutenant. "Back the main topsail; it was done quickly, and the ship's way stopped. Again rang out the guiding voice—"Man the life boat; lively there, men;" and a midshipman, a coxswain and six men sprang in, and were soon pulling away on their errand of mercy for the light on the buoy. Eagerly we listened for the shout which might tell us our shipmate was saved; but all was still and silent, save only the rush of the waves, as they swashed by us. Soon we could see the light disappear, and we knew the men were lifting it into the boat to return to the ship. In a short time they were alongside; the middy touched his cap, and said, to the officer of the deck, "Come on board, sir; we could not find the man." Poor fellow, he was gone, and he will *not* be found, until the great sea gives up its dead. The boat is soon hoisted in, and the lieutenant sadly gives the order to fill away. The yards are braced around, and we are again on our course. "Ah, poor Bill," was heard from one or two sailors, probably old chums of the drowned man, and he is forgotten, or, at least, not again spoken of. Seamen have a peculiar aversion of speaking about a man who has been lost; it is one of their little class superstitions; they think it is not lucky.

THE CATAMARANS.

Nothing of moment occurred, until we arrived at a place called Ceara, a coaling station three degrees south of the line, where we remained four days, coaling from catamarans; and as this was my first sight of this queer looking craft, I was much interested and amused while watching the black crew, and their novel style of navigating the salty seas. These catamarans are merely three logs fastened together, a couple of smaller timbers fastened on deck, across, answer for seats when the sweeps (oars) are used, and one stout mast. Half way up this mast is a seat, or crow's nest, for accommodating a passenger to or from the ships in the bay.

We were to take coal here, but how to get it I could not understand, as the place is a mere open roadstead, with no wharf accommodation; but I soon found that my friends, the catamarans, were to be used; for one of them came alongside with fifteen bags of coal, each weighing one hundred pounds, which were soon on board, and the craft, hoisting her lateen sail, was away again. And now, as fast as we could receive it, a small fleet of them were bringing us coal. The second day the wind blew in shore pretty stiff, and rolled in a tolerably heavy sea, which broke in a long, deep line of foam on the shore; and *now* it was fun to see the "beggars" get through the surf, and out into the deep water with their load. The bags were tied fast, *but the crew were not.* Now a big roller would break on the sand, and, as the water rushed back, the black fellows shoved their craft out as far as they could, and when the next sea came, it broke over them, and they disappeared; but directly they shoved again further out, until soon they would be dancing along, over, and under, and through the waves. It was like playing hide and seek. Now they would be seen on top of a great sea, and then they would be covered, buried by the next one; the next minute they appeared again; but how the men ever stuck to their queer craft was the most wonderful thing to me. Yet they can get through the fiercest surf; sometimes on top of the waves, sometimes hidden beneath the waters. Sometimes the men are completely washed off the catamaran—men floating one way, and the catamaran another, till they seem to catch each other again by magic. I had one trip in the crow's-nest of one of them, when it was only a little rough, and I had my full of *catamaraning.*

On the fourth day, steam was again raised, and we went to sea, bound for the New York of South America, the beautiful capital of the great Empire of Brazil,

RIO DE JANEIRO,

Which place we arrived at in twelve days from Ceara.

We were all very anxious to arrive here, as our letters from home were to be addressed to us at this place; and great was the excitement while waiting for our mail bag. We saluted the Brazilian flag with twenty-one guns, which was promptly answered from a battery on shore by the same number of guns.

We here found the Pawnee, sloop; also the gunboat Unadillo, both United States steamships. What a glorious spectacle must have presented itself to the early navigators, De Solis, Magellan and Martin Affonso de Souza, who were the first Europeans that ever entered the narrow portal which constitutes the entrance to the "Hidden Waters," as this almost land-locked bay was most appropriately and poetically called by the Tamoya Indians.

De Souza, as the common tradition runs, supposed he had entered the mouth of a great river, rivaling the Orinoco or the Amazon, and named it Rio de Janeiro, (River of January,) after the month, January, 1531, in which he made the discovery; but although he made a great discovery, he certainly made a great mistake; for there is no river here, but there is the most magnificent, glorious bay in the world, surrounded by the grandest scenery.

To give an idea of its size and extent—it is nearly eighteen nautical miles from the Sugar-loaf Mountain, at the entrance, to the head of the bay, and in width eleven miles, from Praira Grande to the railway station on the northern shore; and this vast body of water is entered through a portal little over a mile in width. The bay is dotted with beautiful islands, covered with the rich, varied and luxuriant verdure of the tropics, while the climate is a perpetual summer. As my poor Charley Shears remarked: "Well, Fred., I have witnessed a good many beautified landscrapes in my relaventful consistence, and I've traveled a few miles; but, as I am a gentleman, I never transperienced more extra-sublimer commotions, in conjunction with pleasurefull feelings, than I do to-night, under this regnificent sky, in this delightful locality; in short," said he, breaking from the sublime to the ridiculous, "*saw my leg off, but this is grand.*"

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

COLOR.

BY J. H. T.

Continued from page 136.

Indigo.—Grind it with water of gum arabic.

Blue bice.—Grind it, with clean water, as fine as can be, and then put it in a shell, and wash it as follows: put as much water to it as will fill up the shell or vessel you put it into, and stir it well; let it stand for an hour, then throw away the dirty water and filth, and put in more clean water; do this four or five times. Then put some weak gum arabic water to it, that the bice may fall to the bottom; pour off the gum water, and put more to it; wash it again, dry it and mix it with weak gum water, if you would have it raise to the same color; but with a stiff water of gum lake, if you desire a most perfect blue; but grind it with a little ceruse, if you would have it a light blue; if you would have it a very deep blue, add litmus water.

Take fine litmus, cut it into pieces, lay it in weak water of gum lake for twenty-four hours, and you have a water of the most perfect azure, with which you may diaper and damask upon all other blues, to make them appear more fair and beautiful.

Orchal.—Grind it with unslacked lime and urine, it makes a pure violet; by putting in more or less lime, you make the violet bright or deep as you please.

English ochre.—It is a good yellow color and lies very even of itself, being well ground, it is of great use.

Pink mixed with blue bice.—It is a good green. The fairest pink is best, well ground and tempered with blue bice, allowing one quantity of pink to three of bice. If you would deepen it for landscapes or drapery, mix a little indigo finely ground with it.

Indian lake.—This makes a delicate purple; grind it with a little gum water, and when it is fine, mix a little powder of white sugar candy with it, which will preserve it from cracking.

Indian red makes a very dark red; because this color is very coarse, you should use umber and a little lake tempered, which is good.

Ivory black.—Grind it with a little white sugar candy, and it will preserve it from cracking; use pure water.

Cherry stones, burnt in a crucible, will make a splendid black; grind the same as ivory black. It is good for drapery and for a black satin; temper it with a little white, Indian lake and indigo. Heighten it with a little lighter mixture, and deepen it with ivory black.

Caput Mortuum of Vitriol.—First grind it well upon a marble, then wash it well, and grind it with a weak gum lake water; it will make a deep red or almost purple color.

OBSERVATIONS ON MINERAL COLORS.

1. Sublimate, dissolved in fair water, and mixed with a little spirits of urine, makes a milk-white mixture in a moment, which, by the addition of aqua fortis, becomes transparent again immediately.

2. If you sublime together two ounces of sublimate and one ounce of tin-glass, you will have a sublimate not inferior to the best orient pearl in the world.

3. Silver, dissolved in aqua fortis and evaporated to dryness, and having had water poured two or three times upon it, and evaporated until the calf is dry, leaves it of a snow whiteness; which rubbed upon the skin, with a little water or spittle, produces a blackness not to be got off for some days. With this, may be dyed ivory, hair, and horns, in fair water, of a lasting black.

4. Coral, dissolved by oil of vitriol, sulphur, or spirits of vinegar, and precipitated by oil of tartar, yields a snow whiteness. The same of crude lead, and quicksilver dissolved in aqua fortis. So butter of antimony, rectified by bare effusion in a good quantity of fair water, will, though unctious, be precipitated into some white powder, which, being washed from its corrosive salts, is called mercurious vitæ, the like of which may be made without the addition of any mercury.

5. Mercury, sublimate and precipitate, yields, with the spirits urine, hartshorn, or the like, a white precipitate; but with the solution of potashes, or other lixiviate salts, an orange tawny; and if on a filtrated solution of vitriol you use the solution of a fixed salt, there will subside a copious substance, far from whiteness, which chemists call the sulphur of vitriol.

6. If two ounces of copper be mixed with one ounce of tin, the reddishness will disappear; and if arsenic, calcined nitre, in a just proportion, be mixed with melted copper, it will be blanched both within and without.

7. Fine powders of blue bice and yellow orpiment, finely mixed, produce a good green; and a high yellow solution of a good gold in aqua regia, mixed with a due quantity of a deep blue solution of crude copper in strong spirits of

urine, produces a transparent green; and so blue and yellow enamel fused together in the flame of a lamp, being strongly blowed on without ceasing, produces at length a green color.

8. An urinous salt; put in a large quantity into the dissolution of blue vitriol in fair water, turn the liquor and corpuscle, which resided, into a yellowish color like yellow ochre.

9. Verdigris, ground with sal-ammoniac, powdered, digested for a while in a horse dung-hill, makes a glorious blue.

10. The true glass of antimony, extracted with acid spirits, with or without wine, yields a red tincture.

11. Balsam of sulphur, of a deep red in the glass, shaked about or dropped upon paper, gives a yellow stain.

12. If brimstone and sal-ammoniac, powdered, of each five ounces, be mixed with six ounces of quick-lime in powder, and distilled in a retort in sand by degrees, you will have a volatile spirit of sulphur of excellent redness, though none of the ingredients be so. So, also, oil of aniseed, mixed with oil of vitriol, gives in a trice a blood-red color, which soon decays.

13. Fine silver, dissolved in aqua-fortis, and precipitated with spirit of salt, upon the first decanting of the liquor, the remaining matter will be purely white; but lying uncovered, that which is exposed to the ambient air, will lose its whiteness.

14. Sublimate, dissolved in a quantity of water, and filtered till it is as clear as crystal, mixed in a Venice glass, with good oil of tartar, per deliquium, filtered, three or four drops to a spoonful, will yield an opacous liquor, or deep orange color; after which, if four or five drops of vitriol be dropped in, and the glass straightway be shaken strongly, the whole color will disappear. It will be colorless without any sediment.

15. Spirit of sal-ammoniac makes the solution of verdigris an excellent azure; but it makes the solution of sublimate yield a white precipitate.

16. So the solution of filings copper in spirit of urine, made by fermentation, produces a lovely azure color; which, with oil of vitriol, a few drops to a spoonful, is in a second deprived of the same, and rendered like fair water.

17. Quicksilver, mixed with three or four times its weight of good oil of vitriol, and the oil drawn off in sand, through a glass retort, leaves a snow-white precipitate, which by the effusion of fair water, becomes one of the loveliest light yellows in the world, and a durable color.

18. Tin, calcined *per se* by fire, affords a very white calx, called putty; lead, a red powder, called minium; copper, a dark or grayish powder; iron, a dirty yellowish color, called crocus martis; and mercury, a red powder.

19. Gold, dissolved in aqua regia, ennobles the menstruum with its own color; silver coin dissolved in aqua fortis, yields a tincture like that of copper, but fine silver a kind of blueness. Copper dissolved in spirit of sugar, drawn off in a glass retort, or in oil, or spirits of turpentine, affords a green tincture; but in aqua fortis a blue.

20. Vermilion is made of mercury and brimstone sublimated together in a due proportion.

[TO BE CONTINUED.]

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For the Coach-Makers' International Journal.

INQUIRY.

Mr. Editor:—It is generally believed that a large sized wooden axled wagon, skeined, will run much easier upon an uneven road than an iron axle which is much smaller than the wooden axle. We believe in the foregoing theory, but are unable to give the reason. Will some of your readers and theorists give us some light on this subject? D. & M.

For the Coach-Makers' International Journal.

LABOR—MENTAL AND PHYSICAL.

BY C. B. S.

Very much has been written on this great subject—labor; a subject which is agitating the whole civilized world.

But it is *physical* and not *mental* labor which is now the great question of the day. It is a subject that is interesting alike to all, both old and young, rich and poor, man and woman, for it is to labor that we owe our existence.

It is not so much with physical as with mental labor that we have to do in this article. God, in creating man and placing him on this sphere, told him to labor, but he did not say in what manner, nor did he mention any *particular thing* which he was to do; it is, therefore, to be inferred that he was to labor as best suited him. The Bible informs us that "Abel was a keeper of sheep, but Cain was a tiller of the ground." Here already had man commenced to labor in *two different ways*.

It is to be presumed that while some men were to labor with the hands, others were to labor with the mind or brain.

Have any of your readers ever gave a thought as to which was the most difficult—a day's work with some mechanical tool, or a day's work with the pen? Some may answer that the latter is by far the easiest; but have you ever tried it? How many can sit down and compose even a passable letter? Strictly speaking, very few. They sit and think what they shall write about, and then give it up by saying they do not know how to express themselves in writing.

It is true the mighty steam engine is made by *physical* labor, but was it not first thought of and conceived by *mental* labor? Every great idea or improvement has to be conceived by the mind before it can be, or is accomplished. Look at the Pacific Railroad, the most stupendous work ever performed by man; the Suez Canal, the telegraphic wires which now cross and recross each other all over our broad domain, electricity, steam, &c. What would they have been had it not been for the great minds of such men as Watt, Franklin, Morse, &c.?

So it is through all the ages which man has passed through, and so will it be until the world and man is no more. There are men like Vanderbilt, Stewart, Astor and others, who may be said to be literally rolling in wealth, but are not their active brains constantly revolving new schemes to secure additional wealth? and the result of these schemes and plans is a need of more physical labor, thus giving employment to the so-called laboring man.

Mental and physical labor go hand-in-hand; one is useless without the other; for the inventor might plan in vain did not physical labor effect his plans; while, on the other hand, was it not for the inventor, or thinking man, there would be nothing for the laboring man to do.

Without physical labor man could not live; without mental labor there would be nothing worth living *for*. Too much mental labor has made many a man crazy, which physical labor has seldom or never done.

'Tis true some men perform both the mental and physical labors; for there are some ministers of the Gospel, who work all the week, at hard out-door work, and yet must have their sermons prepared for the Sabbath; and they, together with the physician, the lawyer, editor, &c., all have arduous duties to perform, as hard, if not harder, than the hard-working mechanic. The racking headaches, which they *enjoy* (?) for days together, are proofs positive that this is a fact.

As mental and physical labor go hand in hand, so do capital and labor, for what would capital be without labor, or labor without capital? As soon as some grand enterprise is projected, are not the first two considerations capital and labor? With the former the latter can easily be obtained, and without the latter capital would be useless.

All the poor or laboring classes are not industrious, nor all the rich indolent. Far from it. For there are many poor people who, through laziness, will always remain poor, and others who, by their industry, gradually acquire independence, yet, being wealthy, still keep on in the same routine of business, though, perhaps, on a larger scale than formerly. Then there are wealthy men who, through a want of prudence or forethought, or through negligence and carelessness, suddenly find themselves reduced to poverty.

Though capital and labor are dependent on each other, yet, in many cases, war is waged between them, to the detriment of both; for though capital may be a very needful thing in this world, yet it is labor that builds our towns and cities, cultivates our land, and gives us the many luxuries of life.

* * *

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 5.

BY J. H. T.

A Few Hints on Colors.—In buying ultramarine, see that it is of a high color, and well ground, which may be known by putting it between the teeth, and if it feels gritty it is a sign it has not been well ground. To know whether it be pure and unmixed, put a little into a crucible, and so heat it red hot, and if the powder has not changed color after this trial, it is certainly pure; on the contrary, if there be any change, or any black specks in it, then it has been adulterated. True ultramarine blue, dropped into lemon juice, destroys the color.

To Test Vermilion—Use muriatic acid, and if your vermilion be pure it will not hurt it; but, if impure, it will turn white or gray. Orange vermilion is the best used; it stands the same test as dark vermilion.

Pure Indian Red will stand the test of fire; in fact, nothing effects it.

Lakes.—The best madder lakes are not soluble in liquid ammonia, but bad lakes are soluble. The best carmine lake should be very vivid, bordering somewhat on the purple, and is of an almost impalpable powder.

Purple lakes will not last; the German purple lakes soon fade and become cloudy. Rose colors of madder and pure ultramarine make the best purples for standing, as light and impure air will not effect them. Ultramarine and pure vermilion are equally as permanent, but less transparent. A purple from one color can be made, which is very durable, by burning madder carmine, stirring it until it becomes the color required. Burnt umber adds to the power of lake, and improves drying.

Turkish umber is the best; it is of a brown citrine color, semi-opaque, and is perfectly durable. In order to burn umber you must put it in the naked fire in large lumps, and not take it out till it is thoroughly red hot; then take it out and let it cool gradually. Lampblack, which is a color of so greasy a nature, should also be burned, as it takes a long time to dry unless treated so. The method of burning, or rather drying lampblack, is as follows: put it into an iron ladle or a crucible, and set it over a clear fire, letting it remain till it be red hot, or so near it that there is no manner of smoke arises from it.

A durable light red is made by burning brown ochre.

Burnt verdigris makes the best olive-color, and dries well. All copper-greens make good olives, when burned.

The choice of linseed oil.—The best linseed oil is yellow, transparent, comparatively sweet scented, and has a flavor resembling that of the cucumber. In boiling oil, use red lead and umber, or manganese, an ounce to a pint; when cooling, a little magnesia will help the scum to rise and clear the oil.

Turpentine, to be good, should be clear and white as water, of a strong, penetrating smell, and very inflammable.

For the Coach-Makers' International Journal.

THINGS IN NEW HAVEN.

'Tis toil and sweat, and sweat and toil,
Till the blood in our veins seem ready to boil,
And we sigh for a cool, shady spot on the shore,
Where no sound is heard but the old ocean's roar,
Where the thoughts of a carriage will haunt us no more,
Till the hot, dusty weeks of the dog-days are o'er.

This is about the state of body and mind which we are all in at present, but it is of no use to repine. The shady groves are not for us—*we* must work. The bosses say we must, our wives say we must, everybody says we must. Oh, that everlasting must, must, must. It is constantly before us, and we see so little of anything else that the whole world begins to look musty.

"But what has that to do with coach-making?" you ask; "tell us how the trade is with you." Well, it was never better than at present. Everybody is trying to do more than everybody else, and each one thinks he is doing it; and, judging by the number of carriages sent off every day, I should think they were all doing it. The demand for heavy work is very large, far exceeding the supply, and repositories are being thinned out very fast. The calls are mostly for falling-top carriages, Landaus and Landaulettes, Bretts and phætons. In light work the square box takes the lead, and very properly, too, for it is the most sensible wagon ever built.

There is nothing very new or strange in the styles of either light or heavy work. The changes are little unimportant cuts here and there, which amount to nothing more than the name of a change, and a license to say, "this is our summer style." VIDE.

Pencil, Rule & Square.

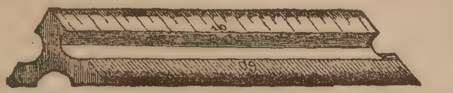
D. BOARD, EDITOR.

SCALE DRAFTING.

(Continued from page 156.)

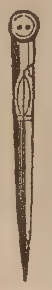
DRAFTING SCALE.

The triangular scale of boxwood, 6 inches long,



has five edges, graduated with two scales on each edge, as follows: one edge has each 3-32 of an inch, and each 3-16 of an inch marked off; the 3-32 are numbered from one end, and the 3-16 from the other; one edge has each $\frac{1}{8}$ of an inch, and each $\frac{1}{4}$ of an inch; one edge has each $\frac{3}{8}$ of an inch, and each $\frac{3}{4}$ of an inch; one edge has each $\frac{1}{2}$ of an inch, and each an inch; one edge has every $1\frac{1}{2}$ inches, and every 3 inches; and one edge is divided into inches and 16ths of an inch. The first division of the 3-32 scale is divided into four equal parts; consequently, if the 3-32 represent one foot, each of the sub-divisions will represent 3 inches. The 3-16, $\frac{1}{8}$, $\frac{1}{4}$ and $\frac{3}{8}$ have the first division divided into twelve equal parts, therefore, if the primary division represents one foot, each of the sub-divisions will represent one inch. The $\frac{1}{2}$ and $\frac{3}{4}$ of an inch have the first division divided into twenty-four equal parts; therefore, if the primary divisions represent one foot, each of the sub-divisions will represent the half of an inch. The 1 inch and $1\frac{1}{2}$ inches have the first division divided into forty-eight equal parts; and if the primary division represents one foot, each of the sub-divisions will stand for $\frac{1}{4}$ of an inch. The 3 inches has the first division divided into ninety-six equal parts; and if the primary division represents one foot, each of the sub-divisions will represent the $\frac{1}{8}$ of an inch.

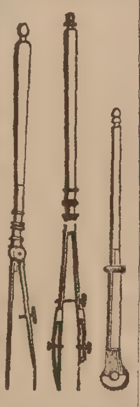
THE PLAIN DIVIDERS.



This instrument consists of two legs, the upper half of which are made of brass or German silver, and the lower half, or points, of tempered steel.

In the fine instruments, the joints about which the legs move should be framed of the two different metals—German silver and steel. By this arrangement the wear is much diminished, and greater uniformity and smoothness of motion is obtained. If this uniformity and smoothness be wanting, it is extremely difficult to set the legs quickly apart, at a desired distance; for, being opened and closed by the fingers of one hand, if the joint is not good, they will move by fits and starts, and either go beyond or stop short of the point; but when they move evenly, the pressure can be so applied as to open the legs at once to the exact distance, and the joint must be sufficiently tight to hold them in this position, and not permit them to deviate from it in consequence of a small amount of pressure which is inseparable from their use. The joints of the dividers are tightened or loosened by inserting the two steel points of the key into the two small holes on one side of the head of the dividers, and turning from one to tighten it, and in the opposite direction to loosen it.

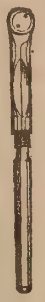
DOTTING PEN AND TWO FORMS OF BOW PEN.



The dotting pen is made like the drawing pen, but has a finely toothed wheel, which revolves between the points, and instead of a continuous ink line, it makes a dot for each tooth, and consequently a line of dots when drawn between two points. It is used when imaginary lines are to be shown on the drawing.

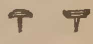
There are two kinds of bow pens made wholly of steel, except the handle, which is either of ivory or German silver. The legs are made of one straight piece of steel, which is bent in the middle until the two points come within the desired distance of each other, and then highly tempered. A steel wire $\frac{3}{4}$ of an inch long, having a fine thread cut on it, is fastened to the middle of one leg, and passes through the other; a small German silver nut is screwed on the end of this wire, and pressing against the leg forces the points closer together; the parts of the legs above the screw being of tempered steel, when the nut is loosened, the points will move back with it.

POCKET DIVIDERS.



It is oftentimes found convenient by the body-maker to have a pair of dividers for use in the shop for transferring scale drafts, which can be carried with safety in the pocket. These are called pocket dividers. The simplest form is a pair of ordinary plain dividers, $4\frac{1}{2}$ inches long, having a German silver sheath, with a blunt point, which screws over the steel points.

FASTENING TACKS

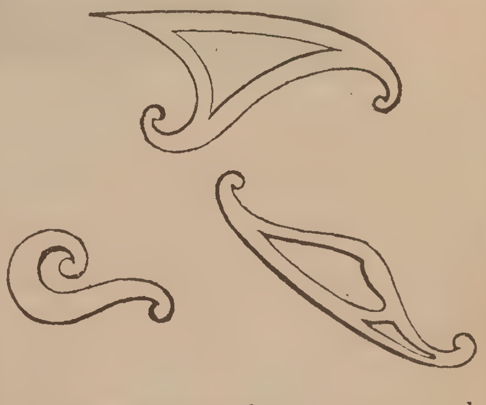
Are small nails, used for fastening the paper to the drawing board. They have large flat heads, and very small sharp  points. The heads are round, and made of brass, German silver or steel, and the points of the best tempered steel, carefully sharpened.

In putting them into the drawing board, the point should be well started with the fingers, and the pin pushed home with a small bottle cork. If the thumb is used for pressing them in, there is danger of the upper part of the pin coming through the head and injuring the thumb.

A new form of fastening tack has just been introduced. It is a right-angled piece of metal, each side of which is one-half an inch long, with three points. It is intended for fastening the paper at the corners.

IRREGULAR CURVES.

These three designs, together with the one we have given, are all that are necessary. These



will be found necessary for some purposes, such as sweeps of iron work, and some short sweeps of bodies; but, as a general rule, they are not of much use for body designing. The patterns of the latter should be taken from pear wood veneer, or fine-grain apple tree; the pear wood being preferable for its fine grain, and is not liable to split. Rosewood and all other cabinet-makers' veneers are unfit, on account of the coarseness of the grain and brittleness of the wood, it being almost impossible to get a smooth edge for the pen to follow. We shall have more to say in regard to patterns in the future.

Hammer, Sledge and Anvil.

V. ULCAN, EDITOR.

DIE PLATE AND SCREW.

Fig. 1, represents a die plate for cutting the thread of clips, where a common or straight die plate would interfere with the opposite shank of the clip, to that intended to cut; bend both shanks of the clip sidewise, so as to bring your die plate in a diagonal position, and you can operate it at pleasure.

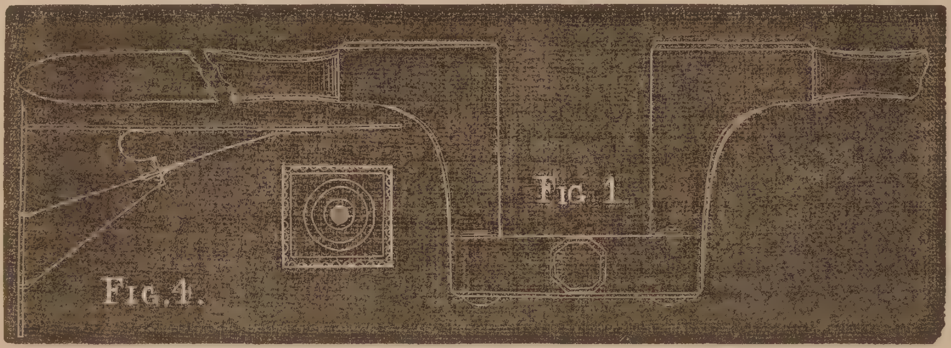


FIG. 1

FIG. 4.

Fig. 2. Top View to Fig. 1.—The dies are mitred, and held firm in their corresponding cavity, by plate *a*, Fig. 1, screwed to the bottom of the frame. Carriage bolts are got up cheaper, more uniform and superior to those made by hand in manufactories for that purpose; all that remains to be done in the smithshop is to replace the nuts, which always seem to be, more or less, wasted or lost. Common nuts are cut out of a medium flat-iron bar, of the size of the nut; then, at the second heat, punched, upset and finished over the puncheon. Larger and more solid nuts for axle-trees, &c., are rolled out of a piece of flat iron of the appropriate size and proportion of the nut, in connection with a square piece of the same material, partly cut off, turned over the end of the cylindrical piece, and then the whole welded. This last-named piece forms the shoulder of the nut. This proceeding causes the grain of the iron to run parallel with the thread, giving it more strength. It is then driven out in a block, with a plain round cavity, and formed by degrees into a square or six-cornered nut.

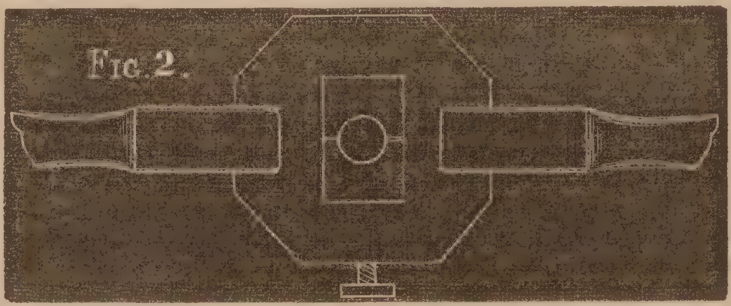


FIG. 2.

To thread a bolt, screw the same lower end upwards, in the vice; press your dies gradually around the bolt, begin to turn cautious and slow until you have obtained the imprint of the thread; turn the die-plate back, screw up closer, and repeat the operation until you obtain a perfect thread. The cutting of the thread, in the nut, is effected in a similar way. The nut is held in the vice, and the tap turned by the tap wrench performs the cutting. The head of the tap must be of the same size as the body of the screw, to allow the tap, after using the full length of it, to drop through the nut. This saves the turning back, which injures the thread in most cases.

For a mechanic of a thoroughly investigating turn of mind, it is but a matter of consequence to know how screws are delineated. A screw is a medium to exert great lever power through small spaces. We distinguish two classes, male or external, and female or internal screws. A tap, either plug or tapering, consists of a cylinder, having on its surface a projecting spiral, viz: the thread. This might be either square or V-shaped, and running right or left. Our drawing, Fig. 3, shows a right hand V-thread, which, when reversed becomes a left-hand thread.

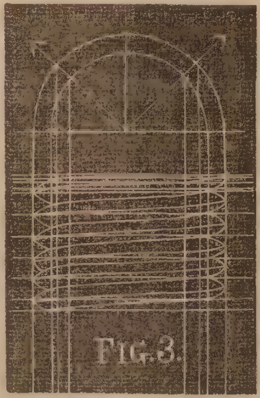


FIG. 3.

The internal screw for the nut performs upon the same principle of a cylindrical curve, revolving around a certain point, and parallel to the axis, reaching that point after a full turn. The larger semi-circle, Fig. 3, is equal to the diameter; the smaller semi-circle measures the depth of the thread. We then divide both circles into four equal spaces, which might be increased, if the curve of the thread requires a peculiar delineation. Vertical lines are drawn from those five points, at the intersecting of both semi-circles, as long as required. Next, set off the space between the thread, and divide into six equal parts, marked at our diagram by seven horizontal lines. These lines will aid to find the true curve of the screw, by connecting the different points of intersection through diagonals, which, if repeated at each interval, will delineate the correct oulline for the whole length of the screw. To find the bottom curve of the thread, draw a diagonal line from the outside of thread to the horizontal line, marking the bottom of thread, where it intersects the vertical line, projecting from smaller semi-circle.

A practical eye will enable the student to work out the longer curves, by drawing them parallel with the first one, by the aid of horizontal lines crossing top and centre of the thread.

Fig. 4 represents patterns of straight stay and step. The smith may display considerable taste on this stay, and produce a piece of work which will be very pleasing to the eye. The *step*, worked out as shown, makes a very genteel finish.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

THE ART OF COACH PAINTING.

(Continued from page 158.)

SCREENS.

The screen is a device for protecting finished work from flying motes or dust, which may be raised thoughtlessly by any one about the shop, the unavoidable accidents resulting from high winds, and the marks and blotches caused by flies. They should be light, yet so braced as to prevent sagging down when placed in position. The frame may be covered with enameled cloth, or heavy brown paper. The latter may be had at any paper warehouse, of various widths, and of any length required.

Having covered the frame, attach wings on each side, tacking the edge of the paper to the frame, using strips of leather or enameled cloth to tack through, to strengthen the paper. The end wings may be separate, and used or not, as circumstances may require. Eyelets, strengthened by leather, and small nails in the frame to attach the wings, complete the description.

The buggy screen should be at least five feet long, and three and a half or four feet wide. Larger sizes, for covering the back and hind quarters of heavy bodies, need only side wings. The painter should have also, small screens to cover the deck panel on standing top, and non-shifting, falling top buggies.

There are a few varnish rooms in the larger cities which may not need anything of the kind, but the majority of them throughout the country are very defective, causing imperfectly finished work.

In using a screen to cover a buggy, first varnish the inside of seat and front; then set a box or empty varnish can on the seat, and lay the screen over, allowing it to rest on the box or can, and on the dash, (if on,) or balanced by a weight laid on top. The wings being folded, when a side is varnished, let down the wing carefully, and follow on around the body, covering up as you finish. Buggies, with deck panels behind, which are so difficult to bring out clean, should be turned over and the panel varnished from beneath. In this case, varnish the *inside* of seat and front of body first, turn the body over and lay the screen on. Commence on one side, following around, finishing the deck panel last, of the body proper; the outside of seat being the last part varnished. The wings may now be let down gently, and the body be safe from accidents.

Standing-top work, or non-shifting falling tops, with *deck panels*, should be *finished* by completing the body before attempting to varnish the deck panel. Having fastened the small screen to the prop blocks, raise it up, and varnish the panel under the screen; let it down gently, and set the body in a position to prevent any draft of air passing across the panel. On round cornered work, let the screen down after the back is varnished, before completing the remaining side. We speak of the round cornered deck panel.

When the screens are not in use they should be hung up, and before using them they should be well dusted off, *outside* of the varnish room.

Coaches, rockaways and other styles, having back and quarter panels to be protected, (especially from flies,) should, after being varnished, be covered by setting the screen up behind, on boxes or a low bench made for the purpose, and the wings be brought around the quarters, and tacked at some convenient point. The body should be in such position that it will not need to be moved after having been covered.

The deck panel, on the front of heavy work, should be varnished under the screen, and not finished, and the screen laid on afterward. This panel should also be varnished last of all, except the sides of the boot or front, and the dash, if paneled.

By this means the deck panel will not catch any dust that may be falling while the painter is moving the body about, in working on the rest of the job.

CANS FOR VARNISH BRUSHES

Should be made of tin, with a close fitting hinged lid. They should be wide, and deep enough to hold two sets of brushes, suspended by the handles, the points clearing the bottom at least an inch, and the brushes not allowed to touch each other. Or the *can* may be made with a flange on the outside, the cover fitting down on to it, and having a handle on top to operate it.

WIRE STAND.

The wire stand is used for laying the varnish brushes on to keep them from getting dirty, and also as the most convenient place for them while varnishing. Take stout wire and bend it into the form of a small bench, with four legs. The top wires should run lengthwise, *four* in number.

The brushes are laid on with the points extending over the outside wire. The wires being few in number, they cannot collect much varnish, and are readily cleaned. It is light, always ready for use, and, in fact, the *best* varnish stand we have ever used.

WHEEL BOARD OR PROP

Is used by the carriage-part painter to elevate the wheels. Is made of wood, and of sufficient length to raise the hind wheel about four inches from the floor, and notched down to adapt it to the front axle. It should be broader at the bottom than at the top, to prevent it being easily overturned. The line of weight should pass through the middle of the board; to do this, it is only necessary to have the highest point in the middle, notching down on each side. Made thus, it will be almost impossible to upset it. The bottom of the board to have an A-shaped cut in it.

As wheel boards cost but little, it is well to have a full supply of them. Those used in the finishing room, if planed smooth and coated with lead, will be easily dusted or washed off, before using.

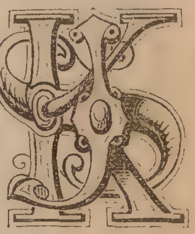
It is not advisable to finish gearings with the single wheel boards, although a great many painters do so. The objections are, that but two wheels can be raised at a time, and in the handling of the gearing during the process of varnishing, there is greater liability to accident, such as the gearing running backward or forward, by an undue pressure on a wheel while varnishing it. It is a better plan to raise the gearing clear of the floor, by means of barrels or light trestles, made expressly for this purpose.

The front trestle should have a bearing for the axle to play on, to admit of the wheels being moved forward or back, when the painter has occasion to work on the inside of the wheels or gearing. When the wheels are all raised clear of the floor there is no trouble shifting wheel boards; the washing, dusting off and varnishing are all done to better advantage, and the wheels may be turned occasionally until the varnish is set, which will correct a tendency to runs or sagging of the varnish from between the spokes at the hub, or at the felloe.

The Sarvin patent wheel is more liable to collect the varnish between the spokes, and allow it to flow out when the wheels are at rest, than those which are made with staggered spokes, or spokes with space between them at the hub. So that it is best to have the wheels all elevated, that each one may be turned half way round, occasionally allowing the flows or runs to settle back again.

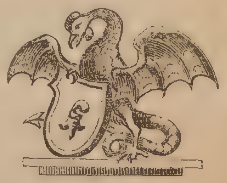
[TO BE CONTINUED.]

MONOGRAM S. K. J.—This pattern was drawn on a rectangle, one and a quarter by one inch. Lay in each letter different in color, using darker tints of the color of each letter where any shading is required.



Be careful to secure a clean and distinct outline of each letter, and in the after-shading endeavor to preserve the outline free from raggedness, or an appearance as if the painter was very nervous. Keep the colors subdued in tone, and depend on the half-lights and high-lights to bring out the design to the degree of sharpness required.

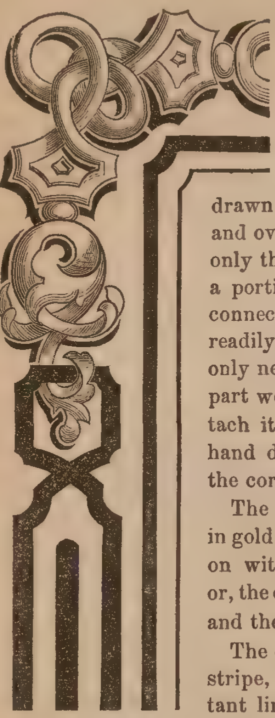
ORNAMENT.—This ornament, the "Wyvern," a species of dragon, is formed with the body of the cock, the wings of the bat, and the tail of the serpent. It will require very delicate handling. It may be all laid in gold, and afterwards glazed over with brown tints of light and dark tones, leaving those parts clear gold where the high lights are required. The high lights may then be put on with straw color, mixed of flake white and yellow, with a delicate pink mixed of flake white and light red, or with white tinted with burnt sienna.



The shield may be glazed with white, pale green, or any other bright color which will contrast strongly with the colors surrounding it. The leafing, "fleur-de-lis," (pronounced flare-da-le,) flower of the lily, should be painted some dark color, so as to properly display it.

It will have a pleasing effect to paint this style of ornament with colors similar to the ground color of the panels; for instance, if the ground color is brown, mix up different tints of lighter brown, painting the ornament all brown, (except the shield,) of different degrees of strength.

If the panels are purple, use lighter tones of purple, and so with other colors. Be careful to keep the outlines sharp and distinct. Lay on the shades with breadth, blending them together so that there will be no patchy appearance. The light and dark markings to be put on last, with quick, confident strokes of the fine-pointed sable pencil. The base may be laid in gold, and the lower division glazed with asphaltum.



Corner Piece to Connect with Broad Stripe.—This is an original design suitable for sleighs. The ornamental part is drawn by use of the circle and oval. We have given only the corner piece, and a portion of the stripe to connect therewith. It will readily be noticed that it is only necessary to draw the part we have given and attach it to the upper right hand division to complete the corner piece.

The corner may be laid in gold, and the stripes run on with some dark color; or, the corner piece in color, and the stripes gold.

The centre line in broad stripe, as well as the distant lines, should be of a hue which will not detract from the brilliancy of the whole.

Wilton, Me., July, 1869.

Mr. Editor—*Sir:*—Please inform me, through the Journal, the best way of getting up the ground color, and painting drop, and Munich lakes; also, the best way to mix gold size, and lay gold leaf. Truly yours, S. G. F.

Answer to Question 1.—The ground color, over which any transparent color is to be laid, should be of a tone similar to the color of the lake to be used when "wet up," provided you wish to preserve the full richness of the lake, and secure its color exactly.

Drop, Munich and English purple lake, and others of similar hue, may be painted on *dark lead color*, Indian red, *browns* of various shades, and *black*.

As these transparent colors partake more or less of the color of the ground work, it is essential to have the under coatings mixed of colors which are durable.

We know of no ground color superior to brown, mixed of *Indian red* and *lamp-black*. In mixing the ground color it is preferable to have it a shade or two darker, rather than lighter than the panel color.

Lakes, painted on black, are very deep and rich in tone. The ground color should be ground out perfectly fine and painted solidly. If the ground is streaked it will be useless to attempt to make a good, solid piece of painting.

One coat of color, and two coats of color and varnish is the best manner of painting lakes.

Answer to Question 2.—Use fat oil, with sugar of lead for a dryer, if you desire a good wearing job. You may add a small quantity of chrome yellow to the fat oil to assist in tracing the lines, or the oil may be used clear, which, we think, is the better plan.

For all ordinary purposes on carriage work, a size mixed of varnish, to which a few drops of fat oil is to be added, will be found good enough. Fat oil prevents the varnish from drying out on the edges and other parts, and will save the painter a great deal of trouble.

Sizing should always be put on as thin as possible to prevent the gold from being "*drowned*," that is, sinking into the size. The size should have tack sufficient only to take the gold.

The leaf may be laid with a "tip," by cutting the books to the sizes required, or by turning down the leaf of the gold book to the size you wish; then pass the finger nail across the gold leaf and apply it to the sizing; rub down the leaf with cotton, or rabbit's paw.

There is no economy in attempting to cut the leaf to the exact size of stripes or other work; let it be a little full, and you will obtain clean edges and a perfect piece of work.

Carriage Painters' Easel.—We would call the attention of carriage painters to Mr. Bruce Irons' advertisement in the back of the Journal. There is not a paint shop in the country but what needs just such a device, for convenience in handling the parts of a body. It is made light, strong and durable. It is two feet one inch high. The sills are two feet two inches long. The width of the easel is one foot four inches. The shaft can be held at any desired angle by means of a pin passing through a circle into the post.

There is also a revolving block in the middle of the shaft, which is regulated by a thumb-screw. The cut sent us is rather out of proportion, but will serve to give an idea of the appearance of the easel.

It takes but a few moments to clamp a body or seat to the easel, and when they are secured to the frame the body or seat may be placed at any angle desired, and fastened there. He proposes to furnish all the iron work, revolving block, claws, &c., except the frame, in perfect order, ready for use and warranted, on receipt of $10.

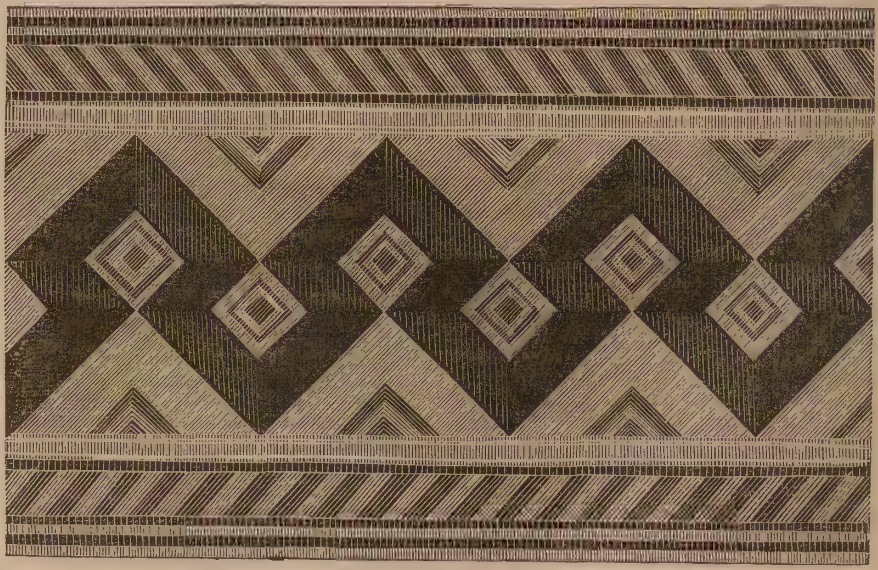
Mr. Irons holds out good inducements to live agents. Painters preferred. Send for terms to agents.

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

NEW DESIGN OF COACH LACE.

The accompanying engraving represents a new pattern of coach lace, two samples of which were furnished us by the well-known firm of W. Horstman & Son, of this city, and are deserving of special notice from us in this department.



We certainly consider the lace superior in finish and firmness to any we have lately used. The patterns are beautifully and artistically executed; the shading being harmoniously blended into the ground color. One pattern is a Bismarck shade of brown, the other a deep, rich blue. The Bismarck sample is remarkably well shaded; it is of a rich shade of brown, variegated with darker tones of brown, and these dark browns are contrasted with black. I use a great deal of lace, but nothing I have ever seen pleases me better than this, and it needs only to be seen to be appreciated.

The other sample is a deep, rich blue, with dark blue and black shading in worsted, and is of the same pattern, and equally as well adapted to blue linings as the Bismarck to brown linings.

The engraving accompanying this notice shows the design of the figures, but fails, of course, to give an adequate idea of the richness of the colors.

I must here remark, that I think it would be a great improvement to *all* our broad lace if there was a selvedge or fag edge $\frac{3}{8}$ of an inch wide woven on to about three yards of lace in each piece, (on both edges,) to be used for the *cushion fronts*. By this means a beautiful pattern might be preserved entire, and the cushion made even *more* square.

H. S., of Asbury, New Jersey, says:

> "My trimmer finds much difficulty in making a top to fit and lay smooth on the hips, or where the welt is sewed in. Will you please publish in your next number how to proceed after setting the bows?"

In reply, we will suppose the head lining to be in back stays, and back curtain all fitted, and our correspondent merely wishes to know how we will fit the leather. Then, we stretch three strips of enameled duck, 2 inches wide, along the top from front to back; the upper one on the line of the seam, the others separated from it 1½ inches each. Then, suppose the leather pasted out and dry, we stretch it lengthwise, by pulling or rubbing one-half way between the seam and pasted part; then draw it on as smooth as possible, throwing a little fullness between the seam and pasted part on the *front bow only;* then punch a hole (small) at the edge of the strainer on the seam line; then make a small chalk mark for the bottom edge on *each bow;* then snap a chalk line on this edge—this will have a sweep on the bottom edge when the leather is taken from the bows. Now, to get the sweep of the seam, I use a sweep stick from bow to bow, the sweep being ⅝ of an inch to 14 inches. Cut down to this mark. Next, draw on the roof piece, and if there be any fullness draw it *from* the welt edge *into* the centre of the roof.

And in this it will be well to remember that the flank or belly part of the leather should be placed to the front rather than the back bow.

Now, punch through the roof into the holes already made on the seam line on each bow when fitting the side quarters. Take off and cut from bow to bow ¼ of an inch outside the holes. Next, baste the welt to the roof. To do this, lay the roof flat on the bench, the edge to the edge of the bench, and stick an awl through welt and roof; then draw just tight enough to be smooth, and stick an awl in the other end. Now, baste overhand stitch, then with the side quarter next to you baste (overhand) the quarter to the roof, from bow mark to bow mark on both. Next, stitch with six-cord thread; take care not to pull too tight, and when stitched pare off basting stitch, and open out your top and hammer down, also slick the welt.

I now draw muslin on the top, one-half of it hanging down, (to be used as a cover for the hair,) and place hair on between the bows only, and not too heavy, nor should it be put on above the line of the seam. Now, draw up the hanging part of the muslin to cover the hair, but do not try to get it too tight, and also tack it down on both of the middle bows. Now, draw on your leather, beginning at the front bow, then pull (on the seam) backward.

I do not think I can give much more explicit directions in this case, as it is very difficult to explain how to do it. A workman must still use judgment, no matter how much of *theory* he may be made acquainted with. But for more extended description, see page 226, of Vol. 3, July number.

WOODEN WHIP SOCKET.

Among the improvements of late years by American mechanics in the construction of carriages, the more minute parts have not been overlooked. The whip socket has had a liberal share of attention, with good results.

Tin superseded the use of leather; vulcanized rubber was well received, and we now have a new patent socket made of wood. It is claimed for this socket that it is free from the objections often made to either tin or gutta percha, in that it cannot be jammed out of shape or be broken. They can be manufactured at small expense, and sold at a much lower figure than any other make. The socket is turned and bored out, having a plain bead at top and bottom. The bottom is swelled out below the lower bead, and the whole painted black and varnished. It is fastened by means of a continuous strap and screw rivet. The patent claim is for a whip socket made of wood, and for the manner of fastening, as described above.

We are personally acquainted with the inventor, Mr. C. S. Bugbee, who is a practical trimmer, and pleased to enroll his name among those who are wide awake, putting their ideas into a tangible form for the benefit of the trade in general.

PATENT LEATHER.

The "patent leather," so called, used in the manufacture of fine boots and shoes, for the skirting of saddles, for carriage-tops and dashboards, for fancy styles of harness, and many other uses, is made by methods quite distinct from ordinary tanning; and it embraces some twenty-five or thirty different varieties, including those colored red, green, blue, amber, bronze and other colors.

The hides are generally tanned with hemlock, and require high liming and weak sour liquor to secure a soft grain, and are but lightly stuffed. They are then run through splitting machines to bring them to the desired thickness. Some of the heavier hides are passed through the machine as much as five or six times. The inner and outer, that is, the grain and flesh-side splits, are commonly sold to the trunk-makers, and bring from twenty-five to upwards of thirty cents per pound.

The great essential in making superior patent leather consists in properly applying the polishing substance, technically termed "sweetmeat," and which is composed for the most part of linseed oil. The hides, previously well dried and softened by beating with pine blocks and by what is known as "boarding," are stretched on frames provided for the purpose. The "sweetmeat" is applied in successive coats, which are fixed by exposure to a high temperature, alternating with the several applications of the material. In order to secure this, the frames are slid into properly constructed ovens, heated by steam-pipes to sixty or seventy degrees, and are left there until the "sweetmeat" or varnish is set. Any roughness that may be found at any stage of the process is polished off with pumice-stone, the dust being very carefully removed by means of a wet brush, followed by a dry one. The entire operation occupies from one to three weeks. That variety known as enamelled leather requires additional manipulation, being passed through a graining machine, in which a heavy brass roller with a slightly corrugated face is pressed forcibly upon the leather to perform a portion of the work of finishing the article, the balance being done by a peculiar system of "boarding" by hand.—*American Artisan.*

Poetry.

FORBIDDING THE BANNS.

BY JOHN HOWE.

"I hereby publish marriage banns
Between these ripe Black Frontignans
And my own mouth; if any know
Just cause, or reason they can show,
Why they should not united be,
Let them declare it now to me;
Or let all future clamor cease,
And ever henceforth hold their peace!"
Thus spoke the boy, and held to view
A bunch of grapes, still wet with dew,
Not knowing that his act and word
Was by the "Master" seen and heard;
Yet there he stood, behind the screen,
Observing, but himself unseen;
And when this newly married pair
Went off to school, he, too, was there.

"Attention, all!" the Master said,
And placed his hand upon the head
Of this same boy, and raised his cane,
As if to strike with might and main.
"I hereby publish marriage banns
Between the stick now in my hands
And this boy's back; if any see
Why they should not united be,
Let them declare it now or never,
And hold their peace henceforth, for ever!"

Agreeing with the Rubric's rule,
He paused, and looked around the school
For answer; when, to his surprise,
He saw another school-boy rise,
Who, holding up his outstretched hands,
Said, "Stop, sir! I forbid the banns!"
"Wherefore?" the Master said; "take heed!"
"The parties, sir, are not agreed!"
He dropped his cane, and muttered low,
"Your reason's good—the boy may go."

SOME MOTHER'S CHILD.

BY FRANCES L. KEELER.

At home or away, in the alley or street,
Wherever I chance in this wide world to meet
A girl that is thoughtless, or a boy that is wild,
My heart echoes softly, "'Tis some mother's child."

And when I see those o'er whom long years have rolled,
Whose hearts have grown hardened, whose spirits are cold,
Be it woman all fallen, or man all defiled,
A voice whispers sadly, "Ah! some mother's child."

No matter how far from the right she hath strayed;
No matter what inroads dishonor hath made;
No matter what element cankered the pearl—
Though tarnished and sullied, she is some mother's girl.

No matter how wayward his footsteps have been;
No matter how deep he is sunken in sin;
No matter how low is his standard of joy—
Though guilty and loathsome, he is some mother's boy.

That head hath been pillowed on tenderest breast;
That form hath been wept o'er, those lips have been pressed;
That soul hath been prayed for in tones sweet and mild;
For *her* sake deal gently with some mother's child.

Phren. Journal.

DURING the recent freshet in Connecticut, a Waterbury editor telegraphed another at the scene of action, "Send me full particulars of the flood." The answer came, "You will find them in Genesis."

Youth's Department.

For the Coach-Makers' International Journal.

"LITTLE NED," THE BIRD DOG.

BY C. W. V.

There are few children but what are fond of a nice dog as a playmate. I was very fond of a good dog when I was a boy, and was taught to be kind to dumb brutes, and I hope no child that reads this takes delight in tormenting either dogs or cats. You know that there are several different kinds of dogs, and that God has been pleased to give them different dispositions or instincts.

The savage bull dog is not fit for a playmate, for he has an ugly temper, and is not fond of being petted, even by a little child.

The Newfoundland is a large and handsome fellow, and may be trusted to take care of little children, and play with them. Should one happen to fall into the water, he has sense enough to know that the child's life is in danger, and will plunge into the stream, and bring the helpless little one safely to the shore.

Then there are hunting dogs—the pointer, the setter, the fox hound, the water spaniel and others.

A very useful little fellow is the rat terrier, and he seems to think that it is *his* business to kill all the rats in the world. The spaniel is fond of the water, and delights in going out with his master bird hunting. Now, the dog I shall tell you about, was a small woolly spaniel. I saw him for the first time at Weedsport, N. Y., which is a pleasant village, a few miles west of Syracuse. I was at the railroad station, standing at the door, in no very good humor, because the freight train would not stop and take me aboard. To wait five or six hours for the passenger train was not very pleasant, and, as I stood thinking about what I had better do, my attention was attracted by the sharp barking of a dog. There was a small stream of running water just beyond the railroad track, where the birds came to sip of the water, or pick up some dainty bit of food. A small bird had just lighted on the opposite bank. The dog saw it, and plunged through the water and out on the other side, as if he was certain of putting his woolly paws on the tiny little creature.

But birdie did not intend to be caught, even by so pretty a dog. He flew over to the other side of the stream, and lit on a bush, hopped about, snapped his tail, and, in actions, seemed to say: "Little dog, you cannot catch me, for, with my wings, I can rise from the ground, and keep out of your reach."

The dog barked and barked; ran up and down the stream, chasing every bird that flitted by him, but could not catch one.

At last he became very tired, and, after shaking the water from his shaggy coat, he rolled over a few times in the dust to dry himself, and then scampered off around the station, and up the street toward town.

I thought no more about him, and would never have learned his name, had I not accidentally met with a farmer who was going over to Port Byron Station, in a buggy, and who agreed to take me over with him.

We had gone but a short distance on the pike when I noticed a small dog following us, and, as he ran ahead, snapping at the grasshoppers, and barking at the birds overhead, I discovered that he was the same dog that I had seen at the railroad station.

The farmer called out: "Here, here, Ned; go back home, sir." I now knew the name of the dear little fellow, and hoped he would follow us.

Ned had no notion of giving up his sport so soon. He ran away on ahead of us, jumped through the fences on one side of the road and then on the other, snuffed among the leaves, raced after the birds, and, at last, was so tired that he could not keep up with the buggy. Shortly after we heard a pitiful cry from "Little Ned," and on stopping the horse, and looking back, we saw him coming as hard as he could run, yelping at every jump. A large terrier was at his heels, snapping at him, and a savage bull dog was waiting in front of him to give him a nip as he passed.

Little Ned did not think of the birds on that run. We drove the dogs off, and called Ned into the buggy; with one bound he was at his master's feet, licking his hands, and trying to show how glad he was to be in a safe place once more.

I now had a chance to get a good view of the little fellow. He was white, with brown spots; he had long brown ears, as fine and soft as silk, which hung down on his breast; his face was brown, and his pretty brown eyes sparkled with fun and frolic. When his master said to him: "Ned, come up in my lap, and ride with your fore-paws on the dash," he jumped up right away. There he stood wagging his bushy tail, and barking at everything that came in sight.

His master said that he could do almost everything, except talk, and that he would not part with him. We reached the station about twelve o'clock, and I had to say good-bye to "Little Ned" by shaking his paw. He wagged his bushy tail, and, in his intelligent eyes, I could read his reply.

I shook hands with the farmer, paid him, and thanked him also; and, as he drove off, I watched "Little Ned" racing after the buggy, until he could be seen no more.

I hope "Little Ned" may always have a kind master for the part he played in amusing me while delayed at Weedsport.

Remedies and Receipts.

PAINTERS' COLIC—May be prevented by a free use of olive oil at meals, and by keeping the person scrupulously clean. The use of alcoholic drinks, as a preventive, is a fatal delusion.

TO REMOVE INK SPOTS.—Take of the plant known as sorrel or sour grass, and bruise a sufficient quantity of it to cover the ink spots on both sides of the fabric. Place the damaged goods between two layers of the sorrel, and, after having laid on a heavy weight, let it remain ten or twelve hours. One or two washings will entirely remove all appearance of the Ink.

TREATMENT OF OIL CLOTH.—Oil cloth ought never to be wetted, if it can possibly be avoided, but merely to be rubbed with a flannel, and polished with a brush of moderate hardness, exactly like a mahogany table, and by this simple means the fading of the colors, and the rotting of the canvas, which are inevitably attendant upon the cloth being kept in a state of moisture or dampness, are entirely avoided.

TO MAKE GOOD APPLE JELLY.—Take apples of the best quality and good flavor, (not sweet,) cut them in quarters or slices, and stew them till soft; then strain out the juice, being very careful not to let any of the pulp go through the strainer. Boil it to the consistency of molasses, then weigh it and add as many pounds of crushed sugar, stirring it constantly till the sugar is dissolved. Add one ounce of extract of lemon to every twenty pounds of jelly, and when cold set it away in close jars. It will keep good for years. Those who have not made jelly in this way will do well to try it; they will find it superior to currant jelly.

RENDERING TEETH INSENSIBLE TO PAIN.—The Dublin Hospital *Gazette* states that diseased teeth have been rendered insensible to pain, by a cement composed of Canada balsam and slacked lime, which is to be inserted in the hollow of a tooth, like a pill. It is stated that such pills afford immediate relief in all toothaches, but chronic cases of inflammation. This remedy for toothache is simple, safe, and can easily be tried by any person.

HOW TO TEST FLOUR.—Place a thimbleful in the palm of the hand and rub it gently with the finger. If the flour smooths down, feeling gentle and slippery, it is of inferior quality, though of fancy brand, high priced, and white as the virgin snow drift, and will never make good, light, wholesome bread. But if the flour rubs rough in the palm, feeling like fine sand, and has an orange tint, purchase confidently. It will not disappoint you. Such flour, whatever may be its branded reputation, though its price be at the lowest figure, will make good, light, nutritious bread.

TO BAKE ROCK.—This fish will be dry and unsavory unless it be prepared properly for the oven. While in Boston an English lady gave us her plan, of which we can speak from experience. She remarked that the pores of the flesh should be filled or covered, so as to prevent the escape of the juices. To accomplish this she takes the yolk of eggs with pulverized crackers, and forms a paste, with which the fish is to be entirely covered. After being placed in the oven, the covering becomes crusted over, prevents the escape of the juices, and furnishes a dish fit for a President.

Scraps of Humor.

THE Cincinnati *Commercial* speaks of Solomon as "an individual with whom wisdom was a specialty."

TEACHER —"Gerty, you were a very good girl to-day." GERTY.—"Yes, ma'am; I couldn't help being good; I had a stiff neck."

A SILLY little girl in Wisconsin swallowed forty percussion caps. Her mother refrained from spanking her, for fear of an explosion.

A WRITER asks, through the Farmer's Department of a cotemporary, if any one can inform a poor man the best way to start a little nursery. *Get married!*

A GENTLEMAN asked a negro boy if he wouldn't take a pinch of snuff. "No," replied the darkey, very respectfully, "me tank you. Pomp's nose not hungry."

THE farmer over in Solebury who tried to sweeten his coffee with his wife's smiles, has gone back to sugar. Nothing like first principles after all.

A MISSIONARY was asked the cause of his poverty. "Principally," said he, with a twinkle in his eye, "because I have preached so much *without notes.*"

STIGGINS, the new married man, says his wife is a perfect rose. The only drawback to his happiness is, that she perhaps blows out a "leetle" too often.

A WHITE boy met a colored lad the other day, and asked him what he had such a short nose for. "I spect's so it wont poke itself into other people's business."

A MOTHER trying one night to get her little daughter to sleep, said:

"Annie, why don't you try to go to sleep?"

"I am trying," she replied.

"But you havn't shut your eyes."

"Well, can't help it; ums come unbottoned."

"MAN," says the anatomist, "changes entirely every seven years." "Therefore," says Jones, "my tailor should not ask me for the bill I contracted in 1862. I am not the same person; hence I owe him nothing."

A PROFESSIONAL beggar boy, some ten years of age, ignorant of the art of reading, bought a card to be placed on his breast, and appeared in the public streets as a "*poor widow with eight small children*."

AN Indianapolis lawyer has received the following: "Sir—can I get a devors & how soon on grounds than I can not support my wife have one child, a boy am willing to take care of the boy, ans, imeaditly & state what it will cost. if it costs $20 I cant pay that much. Direct to box 240 Burlington, Vt."

HON. SANCHO BROWN, of the South Carolina Legislature, rose to a question of privilege recently, and said: "Sah, I ax dis house ef dey gwine to 'low de man who jis tuk his seat to stan on de flo' of dis body and talk to de Gineral Assemblage of Souf Carlina wit dat tun de crank ob de univurss manner dat am so superfishent an ondisgustible."

"PAPA," said a little boy to his father the other day, "when one fellow strikes another, hain't he got a right to strike him back?"

"Certainly he has," replied the father, "the law of self-defense sanctions it."

"Well, I'll tell you what it is," replied young hopeful, "the next time you box my ears, I'll hit you a crack on the smeller."

AN aged Boston lady, whose failing sight rendered necessary a prayer book of great size, recently called on her friends on her way to church, and upon starting again unwittingly picked up a small music box, instead of the prayer book. During the sacred ceremony the old lady attempted to open her prayer book, when, to her surprise and the astonishment of the congregation, the roguish machine struck up "Lannigin's Ball," with great clearness and force.

"DEY DON'T DIE DAT WAY."—The comments of a colored preacher on the text, "It is more blessed to give than receive," are inimitable for point as well as eloquence. "I've known many a church to die 'cause it didn't give enough, but I never knowed a church to die 'cause it gave too much. Dey don't die dat way. Bredern, has any of you knowed a church to die 'cause it gave too much? If you do, just let me know, and I'll make a pilgrimage to that church, and I'll climb by de soft light of de moon to its moss covered roof. and I'll stand dar and lift my hands to heaven and say: 'Blessed are de dead dat die in de Lord.'"

SCENE IN A PUBLIC SCHOOL.—The class in spelling have taken their places.

TEACHER, (*gives out the word.*)—Bicycle.

FIRST BOY, (*whines out.*)—Bye–cick–kle.

TEACHER.—Scandalous; the next.

SECOND BOY.—Bi-sickle.

TEACHER.—Incorrect; the next

THIRD URCHIN.—By–cycle.

TEACHER.—Wrong again. I fear I shall have to keep this class in after school is dismissed.

THIRD URCHIN, (*rises in his place and says:*) "I spelt that word right, for I saw it spelt that ere way in a carriage-makers book, from New York City, which pap says, 'that the editor says, is the most correctest book printed in this country.'"

TEACHER.—Be careful in your replies to me, sir, or I shall *have to correct you* for your impudence.

BOY, (*in an undertone.*)—I don't care what he says; that ere book has lots of nice picters of cows pullin' carts, and men a marchin', with ever such funny things on their heads.

Selections.

Diseases of Workers among Lead and Paint.

In the sixth of a series of reports "On the Preventible Diseases of the Industrial Classes," the *British Medical Journal* says: "Owing to the impossibility of keeping paint from coming into contact with the skin while they are at work; owing to the almost universal practice among them of touching their food with unwashed hands, and to the habit of some of them of wearing corduroy, fustian, and other clothes difficult to cleanse, painters absorb large quantities of the hurtful metal, and suffer gravely in consequence. An attack of colic may occur now and again, and the painter will recover; but if he continue to follow his trade, the more serious diseases—paralysis or kidney disease—are almost certain to attack him at last, and to render him, if not entirely unable to work, so weak and prostrated, that in mental as well as in physical power, he will be but as the ghost of his former self. It is seldom that such workers are killed in early life; they lose power early, and soon become unable to perform a good day's work, but they drag through their labor for many years, suffering always from general weakness. From the time that lead has contaminated their bodies, their lives are wearisome and joyless. Since lead is so dangerous a metal to work with, it is most desirable that all efforts to substitute other materials should meet with attentive consideration. Different substances have been used instead of lead in the manufacture of paint, and with an encouraging amount of success. Zinc has been employed, and we have had favorable reports of it; the silicate of iron has also been used. The zinc is thinner than other paint, and workmen do not like it on this account, but in all other respects it is, we are told, as useful as leaden paint."

Our medical contemporary suggests that all workers among lead should, before commencing or resuming work, wash their hands, not once, but many times a day, in a strong decoction of oak bark, the tannin of which would not only harden the skin, but would protect it against the action of lead. The hair of the workman should be kept short. All painters should, during their work, wear clean cloth caps. All their clothes should be made of materials that can be easily and frequently washed. Their hands should be washed before touching food, and, if stained with paint, should be dipped into a decoction of oak bark. The mouth should be well rinsed with cold water before partaking of food. A weak oak bark decoction should be used as a wash several times a week. The body should be sponged night and morning with cold or tepid water, and the hair thoroughly washed every evening after work. The food should contain a large portion of fatty substances, and milk should be taken in large quantities.—*London Building News.*

TRANSFER ORNAMENTING.

There are many different ways of putting on the ornament, some preferring one way, others a different method, according to circumstances and individual skill. We shall endeavor to give the most simple and successful method known.

First, let it be understood, that all pictures that show the colors complete, are only suitable for white or very light-colored brown; those that are covered with a white grounding, gold, metal, or silver-leaf, can be used on any color, light or dark. After getting the work ready for ornamenting, give the picture a smooth, thin coat of some quick-drying copal varnish, thinned with turpentine, (other preparations are used of which we will speak hereafter,) being careful not to go beyond the outline of the design. Allow it to dry until it has a good tack, and put it on the work in its proper place. Roll it smooth with an india-rubber roller, or smooth it with a paper-folder, until every part adheres well. (For very large pieces, it is well to lay them, after they have the right tack, between two sheets of damp blotting-paper. It will stretch the paper and make a smooth transfer.) Now wet the paper, smoothing it down at the same time, until it has absorbed all the water possible, leave it about a minute and pull off the paper carefully. Should any parts of the design still adhere to the paper, press it down again, wet-rub it until it separates easily.

After having removed the paper press the design on well and wash and dry it off. Should any blisters appear, prick them with a pin and press down. In a few hours the design may be varnished, which will increase the brilliancy of the colors.

An improved method has been invented, which saves time and works with more certainty. The design is coated with a "transfer cement," without regard to outline, transferred as usual, and the traces of the cement around the design washed off with the detergent, which will remove every particle of cement without injuring the colors or gold in the least. A few drops poured on a sponge or chamois skin are sufficient.

For fine ornaments, having many fine lines and touches, it is necessary to use these preparations to make a neat job.—*Painters' Magazine.*

Miscellaneous.

It will be 28 years before the fourth of July will again fall upon Sunday.

CABS have appeared in New York, lettered "Erie Railway Passenger Cab." They are light and elegant, each drawn by one horse; the body being low, with driver's seat raised in front, and carrying four passengers on seats running lengthwise.

VELOCIPEDES are a drug in the New York market. $75 machines won't bring at auction over $12.

THE "seventeen year locusts," which come every year, are announced as having arrived in Connecticut.

THE Boston Peace Jubilee made $110,700 profit, and Gillmore got out of it a house and lot worth $25,000, and a "testimonial benefit."

BUT 106 out of 800 applications made at Washington for velocipede patents have been granted.

MARY SCOTT, of Cairo, Massachusetts, who was said to have been the original Mary who "had a little lamb," died last week, aged 95 years.

ISAAC BRIGGS, a carriage-spring manufacturer at Gannanoque, Canada, has absconded, with liabilities amounting to $200,000.

NEVER wait for a thing to turn up. Go and turn it up yourself. It takes less time, and is sure to be done.

THE Mayor of New York, Oakey Hall's monogram is formed of the letter O encircling a golden key, which being laid across two awls makes the letter H.

IT is estimated that there are at least 50,000 American families permanently established in Europe, living upon the incomes of American investments, and enjoying the protection of the American Government, without contributing one iota to the payment of our taxes, or toward the wealth of the country by their productive labor.

Here is a bit of French philosophy, by Dumas, the younger: "Walk two hours every day. Sleep seven hours every night. Get up as soon as you wake. Speak only when necessary, and say only half what you think. Don't write anything but what you can sign. Think neither too much nor too little of money; it is a good servant but a bad master. Beware of women before you are twenty. Avoid them after you are forty."

The new carriage factory of the Putnam Manufacturing Company, at Bennington, Vt., is nearly finished. It is 100 by 50 feet, and two stories.

"Many a man, in love of self,
To stuff his coffers, starves himself;
Labors, accumulates and spares,
To lay up ruin for his heirs;
Grudges the poor their scanty dole,
Saves everything—except his soul!"

A suit at present going on in a New York Court has developed the fact that street car conductors there are compelled to deposit $100 in order to secure a situation, in which they labor 14 hours a day for the sum of $2; are subject to surveillance as suspected thieves while at work, and, if discharged, are left without characters, and their reported peculations are deducted from the deposits. The New York *Times* comments on this that "it is difficult to say which is the most contemptible—the directors who employ, or the conductors who labor under such degrading conditions. With the $100 thus deposited, a conductor of any energy and spirit could go to the West, buy and stock and work him a farm, and be independent."

National Labor Union.—The Third Annual Session of the National Labor Union will be held in the City of Philadelphia, Pa., beginning at 10 o'clock, A. M., on the 16th of August next. At the New York Session it was decided that the next session should be held in Pittsburg, Pa. This change has since been made in order to insure a larger attendance.

Lately, at a horse show in London, a novelty was exhibited in the form of a vehicle capable of being changed at pleasure into a four-wheeled or a two-wheeled carriage. In the former condition it is capable of carrying six persons. By a simple contrivance, the whole front carriage, wheels, wings and dasher can be removed, and the back part then forms a pretty car for one horse or pony. The change is effected merely by loosening four screws, and can be managed in a few minutes.

Sizing for Gold on Glass.—The following recipe has been recommended: copal varnish is rubbed up fine with either white bole, burnt umber, or ochre—all of which must be quite dry—and then strained through a cloth. The glass having been cleansed with fine chalk is painted over with this varnish, and placed in a warm room, protected from dust. Experience soon teaches when it has become dry enough for applying the leaf, which is pressed on with cotton and then allowed to dry. If necessary, it may then be polished.—*Chemist and Druggist.*

Kalsomining Walls. — Kalsomining is a species of whitewashing, but differs from it in that, instead of lime, Paris white is used. This paint is a sulphate of baryta, and may be procured at any drug or hardware store. In order to prepare kalsomine, soak one-fourth of a pound of glue over night in tepid water; the next day put it into a tin vessel, with a quart of water; set the pail in a kettle of water over the fire, and keep it there until it boils, and then stir constantly till the glue is dissolved. Next take from six to eight pounds of Paris white in another vessel, pour on hot water, and stir until it has the appearance of lime-milk. Add the sizing, stir well, and apply it to the wall with an ordinary whitewash brush while yet warm.

Turpentine.—The Bridgeport (Conn.) Iron Works are now engaged in making several large stills for the Wood Distilling Company, for the manufacture of turpentine. This company has purchased several thousand acres of woodland in North Carolina, and have erected turpentine works, which are now successfully running near Bridgeport. The charcoal is said to be a valuable product of the distillation of the wood.

Grindstones.—The grindstone is a self-sharpening tool, and after having been turned for some time in one direction, (if a hard stone,) the motion should be reversed. Sand of the right grit applied occasionally to a hard stone, will render it quite effectual.

Machine-made Axes in America.—It is alleged that the axe-making trade of the United States is so considerable, as to nearly, if not fully, equal the entire production of edge tools in Sheffield. The axe manufacturers of the States pay a very heavy duty on their steel, then pay heavily for labor, and then cut us out of the Canadian market, and all but monopolise the markets of some of our other colonies. The American axe does not secure this performance under tremendous disadvantages without a reason. It is a perfect instrument for its work. It is formed with mathematical accuracy, and is so formed by machinery. Sheffield, the old home of the axe manufacture, once saw an effort to introduce machinery here. The workmen foolishly resisted that effort, and in so doing drove a most important business into the hands of our American rivals. Is it too late to repair the mischief?—*Sheffield Telegraph.*

Periodicals.

"Zell's Popular Encyclopedia."—Monthly part No. 7, has been laid on our table. Slowly, yet steadily, the editor leads us along through the labyrinth of words of which our language is composed, and rivets our attention and keeps alive our interest in the work by well-selected illustrations. There has been a marked improvement in this last particular, which is a move in the right direction. Address T. Elwood Zell, Nos. 17 and 19 South Sixth street, Philadelphia.

'Oliver Optic," published by Lee & Sheppard, Boston, Mass., continues to be filled with interesting matter for the young, and, we may say, those more advanced in years. The names of "Tommy Toppleton," "Waddie Wimpleton" and "Wolf Bradford," are familiar in many a household, and the anxiety for the coming number at times becomes intense. The "Original Dialogues" are highly appreciated. Subscribe for "Oliver;" it is the best investment a man with a family of children can make.

OFFICE CHART.

The demand for our new Oval Centre Office Chart so far exceeded our expectations that, although we had a large supply struck off, we have been obliged to re-set the form and have a new edition printed, and have substituted some later styles. We are again prepared to meet all demands upon us. It is just the thing for the office, and no carriage shop should be without it. Sent post-paid, on roller, on receipt of price —$1.

CARD PHOTOGRAPHS.

Having made arrangements with one of the best artists in this city, we are now prepared to fill orders at short notice for card photographs of any carriage design heretofore published in the Journal, for the low price of 90 cents per half dozen, $1.50 per dozen, or $10 per hundred of any *one* design. Persons ordering can select the style or styles best suited to their trade, giving the volume and number of the design. No order received for less than half a dozen of each design.

Special designs will be charged at the same rates. Should they need redrawing, an additional charge of $1 for each design will be added.

Church & Watts offer great inducements to buyers. See advertisement on colored leaf back.

Read all the advertisements in the Journal, and see who are the live men in business.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—To know the whereabouts of Anthony Selle, by trade a carriage trimmer. Last heard from at Adrain, Mich., July 23d, 1868. Any person knowing of his whereabouts will confer a great favor by addressing C. Selle, Dubuque, Iowa, or F. Selle, Detroit, Mich.

Wanted.—A young man who has worked at a fire for three years, would like to go under instructions for one year. Address Fred. A. De Voe, Brooklyn Post Office, N. Y.

Wanted—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

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Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, July 20, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.

" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.: No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 40 per cent. discount.

Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.

Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.

Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.

" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.

" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.

" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.

" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 40 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.

Buckram, per yard, 16 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.

" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.

Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30; English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.

Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 33c.; 6-4, 40c.; drilling, 5-4, 46c.; 48 inch, 48c.; 6-4; 62c.; duck, 5-4, 63c.; 50 inch, 68c.; 6-4, 75c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 60c.; 48 inch, 62c.; flock drill, 48 inch, 95c.; do., muslin, 85c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 15c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.58; New York pat., ⅝, $1.12; ¾, $1.20.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.

" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $20.

Leather, per foot, dash, No. 1, 14c.: do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 26c. to 28c.; do., No. 2, 24c.; enam. trimming, 24c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

" spoke ten. machine, each, sm., $15; large, $25.

" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head, 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.

" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.

" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.

" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

" Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.

" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $2.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2.15; 1⅛, $2.50; 1¼, 2.65.

" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.

" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.

" ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.

" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6

" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.

Slat irons, wrought, N. Y. pat., per doz. sets, 4bows, $12

" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.

" plated, short, $1.20; 1 long iron, $1.37.

" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.

" Bright oil-tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.

" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.20; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.

" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.

" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.

" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb., No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 1C, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.

" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

" white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.

" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in. diameter, $2 to $2.25 per set,

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.

" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in. and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.40; deep, $1.30; Ger. gotn. pale, $1.40; deep, $1.30; Chinese, $1.30; Trieste, $1.25; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 15c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.: 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, the balance of Volume, for twenty-five (25) cents. DISPLAYED TYPE fifty (50) cents for each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

*HARPER, HENRY, (Harper's Patent,) Butler, Ill.
JAMES JUDD, Agent, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

MOSSER & CAMP, Allentown, Pa.
*SAUNDERS, M., Hastings, on the Hudson, N. Y.
ATWATER, H., Agent. 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winstead, Conn.

Carriage Body Manufacturers.

* HOLDSWORTH, WM., Chester, Pa.
NORCROSS, H. S., 1712 Coates street, Phila., Pa.
STEPHEN PERKINS, Rahway, N. J.

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***SCOTT & DAY,** 38 North Third st., Phila., Pa.
***SHIELDS, WM.,** Girard Bolt Works, 23d above Race st., Philada., Pa.
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***SKELLEY, T.,** Philadelphia Carriage Bolt Works, 24th, below Callowhill st., Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.
HUBLEY, ADAMS & CO., 5 Market st., Pittsburg, Pa.

Carriage Castings.

***FITZGERALD & FLAGG,** 218 North Third street Phila., Pa.

Carriage Draftsmen.

*MULLER, A., 142 Second street, New York City.

Carriage Mounting Manufacturers.

*BURWELL, WM., 236 Arch street, Phila., Pa.

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*BROWN, S. N. & CO., Dayton, O.
LOUCKS, WM., 825 N. Thirteenth st., Philadelphia.

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*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
McNALLY & McMULLEN, 39 S. Charles st., do do
*PORTER, R. B. & SON, 78 West Pratt st., do do
SHARE, GEO. K. & CO., Indianapolis, Ind.
ATWATER, H., 1625 Market st., Phila.
*BURWELL, WM.. 236 Arch st., Phila., Pa.
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FORT, GEO. E., 147 North Third st., do
KEIM, GEO. DEB., 162 N. Third st., do
***ROUSE, J. G. & CO.,** 4th & Arch sts., Phila.
***SCOTT & DAY,** 38 North Third st. do
SNYDER, W. & A. J., 115 North Third st., do
STOTESBURY & KENNEDY, 56 North Third st., Phila., Pa.
MOORE & CATTELL, Salem, N. J.
SMITH, E. B. & CO., 77 Warren st., Trenton, N. J.
KIRK, HAMMOND & CO., West Chester, Pa.

Carriage Wood-work.

*BROWN, S. N. & CO., Dayton, O.
OLMSTEAD & JONES, Syracuse, N. Y.

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UNDERHILL BROS., 71 Haverhill st., Boston, Mass.
WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.
BROWN, PHILIP, Rahway, N. J.

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*CAREY & POST, 234 Carter st., Phila., Pa.
***NIXON & WIGLEY,** 39 North 7th St., Philada.

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SPRAGUE, F., Dayton, O.
BIDWELL, DANIEL, 254 Pearl st., New York City.
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*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
McNALLY & McMULLEN, 39 S. Charles st., do do
*PORTER, R. B. & SON, 78 W. Pratt st., do do
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SHARE, GEO. K. & CO., Indianapolis, Ind.
***SCOTT & DAY,** 38 North Third st., Phila., Pa.

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HACKERT, JULIUS, 171 Suffolk st,, New York City.
ATWATER, H., Agent, 1625 Market st., Philo.

Paint and Varnish Brushes.

***FELTON, RAU & SIBLEY,** 136 North Fourth st., Phila., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.
***THUM, CHAS. D.,** 150 N. 3d st., do

Permanent Wood Filling.

VALENTINE & CO., (Piotrowsky's Patent,) 32 Kilby st., Boston, Mass.

Rubber Enameled Carriage Cloth.

***ODORLESS RUBBER CO.,** 19 Park Place, New York City.

Silver Platers.

*BURWELL, WM., 236 Arch st., Phila., Pa.

Paints, Oils and Varnish.

TRUMAN, DUNHAM & CO., 118 Superior st., Cleveland.
BIDWELL, DANIEL, 254 Pearl st., New York City.
***FELTON, RAU & SIBLEY,** 136 North Fourth st. Phila., Pa.
LUCAS, JOHN & CO., 141 N. 4th st. Phila., Pa.
McKNIGHT & CO., 22d and Race streets, Phila., Pa.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., do

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

CROWELL, DAVID, Rahway, N. J.
NEWELL BROTHERS, Owego, New York.
***HOOPES, BRO. & DARLINGTON,** W. Chester, Pa.

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ATWATER, H., Agent, 1625 Market st., Phila.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.
RAHWAY SPRING AND BOLT WORKS, Rahway, N.J.

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DUNBAR, HOBART & WHIDDIN, S. Abington, Mass.

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*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

***ATKINSON, W. & CO.,** 270 Broadway, New York.
MOLLER, CHAS., (sole Agent for U. S.,) 35 Maiden lane, New York City.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

VALENTINE & CO., 32 Kilby st., Boston, Mass.
COLGATE & CO.. 401 Illinois st., Chicago, Ill.
FITZGERALD, J. D., 315 Mulberry st., Newark, N. J.
***MINETT & CO.,** 60 Pearl st., New York City; 7 South Tenth st., Phila., Pa.
PARKER & GILLESPIE, 228 Pearl st., New York City.
***SMITH, EDWARD & CO.,** 161 William st., N.Y.
***FELTON, RAU & SIBLEY,** 136 North Fourth st., Phila., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.

White Lead and Color Works.

BOYLAN & TUERS, 81 Maiden lane, New York City.
TIEMANN, D. F. & CO. 240 Pearl st., New York City.
McKNIGHT & CO., 22d and Race sts., Phila., Pa.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.

AYRES, LIPPINCOTT & CO.,

WHOLESALE DEALERS IN

CARRIAGE MATERIALS AND SADDLERY HARDWARE,

No. 49 NORTH THIRD STREET,

PHILADELPHIA.

We invite the attention of Manufacturers and Dealers to our complete stock of goods in the Carriage line, which we propose to sell at the lowest market rates.

Our facilities in the purchase of goods, in large lines, often enables us to supply them below Dealers and Manufacturers **PUBLISHED** prices.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. IV.—NO. 12. SEPTEMBER, 1869. $3.00 PER ANNUM Always in Advance.

SPECIAL NOTICE.

EXPIRATION NOTICES TO SUBSCRIBERS OF THE JOURNAL WILL HEREAFTER BE GIVEN BY A BLUE X ON WRAPPER, OR COVER, NEXT THE NAME. SHOULD ANY MISTAKES OCCUR PLEASE NOTIFY US AT ONCE. OUR RULE IS TO DISCONTINUE UNLESS INFORMED TO THE CONTRARY.

RETROSPECTIVE.

We have now reached No. 12, of Vol. IV, and it may not be amiss to glance back at the past, and forward in the attempt to divine the future concerning the JOURNAL.

The patrons of Vols. III. and IV. are well aware that an important change was made in the size, general appearance, and more systematic arrangements of the departments in the volume, which is completed with this number.

Feeling assured that the growing demand of the craft upon us, would justify the extra outlay required to bring out our monthly in its present form, we decided to enlarge it, at that time, to a size which would be sufficient for time to come. A comparison of No. 1, of this volume, with later numbers of the same, will prove that it was not enlarged a day too soon.

The plates are displayed to better advantage. The departments are allowed more space, and the advertisements can be made more conspicuous.

The readers of the JOURNAL will have noticed that we aim to give connected instructions in the several departments, by taking up a subject, and continuing it through several numbers; and that we have not dealt out information in disconnected homœopathic doses.

THE FRENCH OR SQUARE RULE,

Re-published in the ¾ scale, was carried through eight numbers, thereby preventing a confusion of lines and letters in the respective diagrams, and being followed in No. 9, with Scale Drafting, will, when *this* is completed, place the *diligent* body-maker in possession of all that he could reasonably ask for, in this connection.

"Wheel Making;" "The Principles of Coloring in Painting;" "Painting of Flowers in Miniature;" "Color;" "The Art of Coach Painting;" "Things Worth Knowing;" "New Styles of Trimmings;" "The Blacksmith Department," and the articles on Varnishes, together with other matter, may be found in Vol. IV., which combine to make this volume especially valuable.

The words of encouragement we have received prompt us to renewed efforts to please, and in the future, as in the past, we shall strive to keep up a lively interest in the several departments, and furnish the latest and most practical styles.

The JOURNAL is now mailed to every State in the Union, to a large number of towns in Canada, and to that far off land of gold in the South Pacific, Australia. We cannot, therefore, be flattered by the *promise of a more widely-extended circulation.* Still we would not have it understood that there are not those who ought to take a publication of this kind; for there are a great many who, through want of money, or through utter indifference, do not subscribe.

Despite the deep-seated jealousies and open opposition we have experienced from certain quarters, our march has been steadily onward, until, to-day, we look upon our baffled and bewildered opponents with contempt, and shall study to make the JOURNAL a valuable assistant to carriage-makers, by crowding its columns with valuable information, wherein we feel assured its permanent success depends.

Patrons of the JOURNAL, you have our best wishes for your health and prosperity, as we lay down the pen, and conclude our labors on No. 12, of Vol. IV.

ECONOMY.

The frugal and judicious use of money appears to be a gift with but comparatively few individuals, while the large majority who are, of necessity, of the working classes, appear to have little or no idea of the value of pennies and dimes, carefully laid away from week to week. The consequence is, that the feeling of true independence, which every man should possess, is crushed out, and they are left a prey to those who stand ever ready to devour them. Among the Germans we find a larger proportion who are frugal and industrious, than perhaps any other class who contribute to make up our teeming population, and we have often been surprised to see how rapidly they accumulate money and property from small wages and salaries.

Doubtless the rigid economy they practice is the result of a training received in their mother country, where a dense population makes economy an absolute necessity; but, from whatever cause, the fact stares us in the face, that they settle among us under many disadvantages, compared with Americans, and also with those foreigners who speak our language, and in a few years have money in bank, or invested in a little home.

The secret of their success lies in this—that they attend strictly to their callings, and no matter what amount of wages they receive, a less or greater sum is laid away every year.

We are acquainted with Germans who, ten years ago, landed in America strangers in a strange land, without money, who could not, of course, speak a word of our language, who are now in possession of money or property sufficient to place them above pinching want during a season of dullness.

By denying themselves for a few years, they obtain a foothold, and later in life their accumulated gains place them in easy circumstances, while others who have lived up to their means, saving nothing, feel themselves to be dependent on the labor of their own hands, to supply the wants of a large, and it may be, extravagant family.

We do not hold up the class above mentioned as perfect samples of what the American Mechanic should be; still, we think it would be far better if they would imitate them to a greater extent in their frugality. .

Young man just out of your time, with great swelling notions of what an important addition you are to your branch as a newly fledged journeyman, or may be to a certain circle of dashing acquaintances, suppose you sit down and camly look into the future, and inquire what is to be your condition, financially, ten years hence? If you do not ask yourself this question, early in life, and determine to lay by a certain amount of your earnings every year, rest assured, you will chide yourself at a later period, and feel the cruel grasp of necessity forcing you into a compliance with demands which will tend to lower yourself in your own estimation.

NOTES BY THE WAY.

[*Concluded from page* 164.]

CHICAGO.—In approaching the city we noticed that the face of the country was low and swampy, and Chicago instead of being a "city set on a hill," is in reality a city set up on stilts or trestle work; for it has been raised up out of the mud, and placed on a dry footing, through that untiring energy which has characterized her citizens since first her name was heralded as a rising city.

The outskirts present a ragged and forlorn appearance, being built up with small frame houses, tenanted by a class of persons who seldom study to beautify their temporary homes by the use of even whitewash, and certainly not by their personal appearance and habits.

But, we must not judge hastily; for on reaching the heart of the city, we find ourselves in the midst of massive buildings, which are second to none in the Union.

The Crosby Opera House, Tribune Building, and other business houses, and the palatial residences facing Lake Michigan are among those which will attract the attention of strangers.

Wabash avenue is the fashionable drive. On this street the *carriage maker* will not fail to notice the dashing turnouts, and readily decide that the people are fully up to the times in the style and quality of the vehicles they own. On Lake and other streets he will be surprised at the amount of business being carried on.

Mother nature did not, in all probability, suppose that man would ever attempt to found a city on the site of Chicago; and, therefore, did little or nothing to aid them, so that the people of that city are compelled to expend a great amount of labor and capital to put their thoroughfares in a first class condition. North Wells street was being graded while we were there. A stone wall had been laid up about six feet high, on each side of the way, which formed at the top the dividing lines between the sidewalks. Between these walls dirt is carted in until the required level is gained; then the Nicholson pavement is laid. The sidewalks are plank.

Raising the streets leaves the buildings in an unsightly position, which compels owners to *come up higher*.

Not only frame, but the largest size brick buildings have been raised up, the low places have been filled, and, in a few years, no traces of the original site will be visible.

While we always associate the name of Chicago with grain elevators and lumber, yet, in the line of carriage making, she can claim some attention.

There are several shops where light work is manufactured. The heavy work, we believe, is imported from New York and New Haven.

We saw some superb heavy work in the warerooms of Coan & Ten Broeke, and, at other repositories, excellent light work.

Among those who manufacture, we may mention the names of McFarlane, Willet, Brown, Kuhnen & Co., Kock & Kolmar, Loch & Thoruquest, beside others which we cannot just now call to mind.

From Chicago we set our face toward St. Louis, stopping at Joliet, Wilmington, Pontiac, Bloomington, Springfield, Jacksonville, Murrayville and Alton, and reached St. Louis on the 11th of June.

After depositing our satchel, we called on Mr. T. B. Nixon, who is superintendent of Mr. Salorgne's factory.

We found him in the office, introduced ourself as traveling agent of the JOURNAL, and met a cordial reception.

He is a sprightly man, and took in the situation instantly. Having rolled up several names for the JOURNAL himself, he understood the plan of working, and proposed at once to aid us.

Mr. Salorgne showed us through his large and well-appointed establishment, after which we accompanied Mr. Nixon to the factory of Wesley Fallon, where we were introduced to Mr. Duree, superintendent, who went through the different rooms, and was the means of securing several names. He afterwards accompanied us to another shop, and, by his presence and a good word fitly spoken, proved himself to be a good worker for the JOURNAL.

Gentlemen, you will please thus publicly accept our thanks for your disinterested kindness. We found the carriage business comparatively dull here as elsewhere.

Theo. Salorgne has one of the largest shops in the States, and builds from the lightest buggy up to a coach. His paint shop is one of the most convenient we have ever visited. It is forty feet wide, and would measure two hundred feet on a straight line.

Wesley Fallon, Wright, Varey Bros. & Co., and others, are putting up first-class work.

Leaving the city, June 14, at 3, P. M., on the O. & M. R. R., we arrived at Vincennes, Ind., at 10 o'clock, worried out.

The following day we called on our old subscribers, and spent a few hours very pleasantly. Mr. Matters hitched to one of his best buggies, and showed us the town, which is famous in the history of the Indian wars.

Leaving here at two o'clock, for New Albany, Ind., we reached our destination at 7, P. M., and were once more on the banks of the Ohio. Hurrah!

Lewis Hans, Axline & Jackson, and Wyman & Tribbey, each carry on a small business in New Albany. Having enrolled their names, we jumped aboard the ferry which plies between here and Louisville, and were soon on the "Old Kentucky Shore." Having formerly lived in old Kentuck, we did not feel like a stranger.

The weather was very hot during our stay, making our labor rather unpleasant. Having canvassed the city, we found business very dull, and were informed that it had been so for about two years.

Baker & Rubel, Enders & Co., Edward Peirce, W. F. Spybey, Wm. Ruby, and D. Minett, are among the manufacturers.

Friday, June 18th, we bade adieu to the city, and, with a cheerful heart, crossed over again to Indiana, and took the cars for our native city, Cincinnati.

We rested over Sabbath at Moore's Hill, which is a beautiful village, situated on the O. & M. R. R., forty miles below Cincinnati. Here, in the midst of near and dear relatives, and many friends, we drew a long breath, and banished the JOURNAL from our thoughts. No, that is not true, for we took the name of *one* person, who had formerly worked at carriage painting.

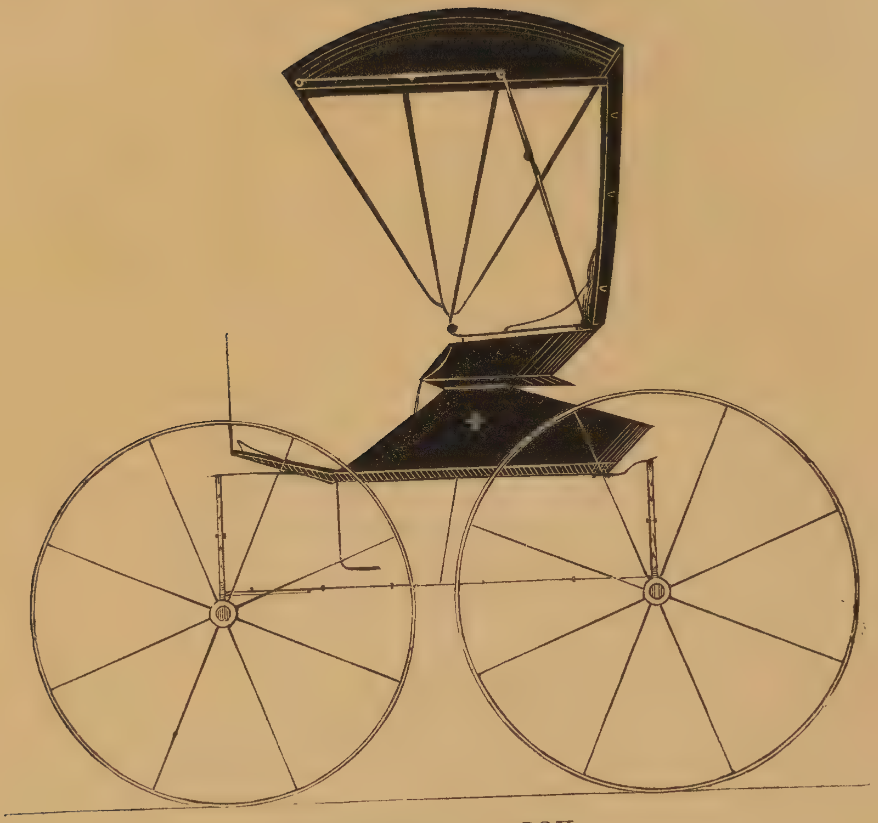
Monday morning, at 6.30, we were again aboard the cars, speeding on toward Cincinnati, and, at 8.30, A. M., we were treading the streets of our native city.

Tuesday we began the severe task of canvassing. Our first call was at the factory of B. Bruce & Co., where we were soon enjoying the presence of some of our warmest friends.

Here we found business very lively. In the smith shop thirteen forges were casting up their red flames, which, with the ringing of anvils and whirring of the machinery, presented a pleasing contrast with the majority of shops we had previously visited. In the wood shop all was life and animation. The moanings of the planing machine, the sharp shrieks of the saws, and deep thud, thud, thud, of the morticing machine, inspired us with new life.

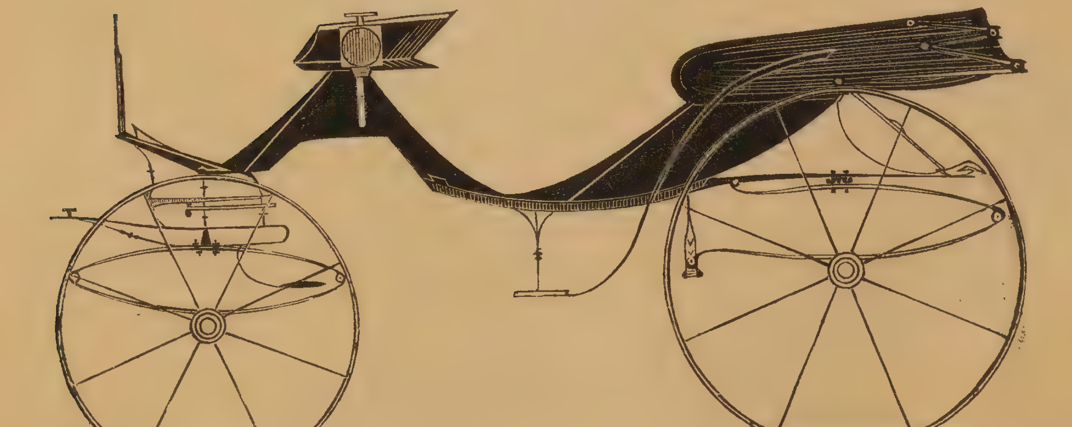
In the paint room we grasped the hand of Mr. John Newman, formerly of New York City, and Mr. Robert Harrison, an esteemed friend. Throughout the shop we met old friends, and took a new lease on life, as we mingled with them.

At Geo. C. Miller & Sons, we found them busy as bees, and, having lately moved into the second



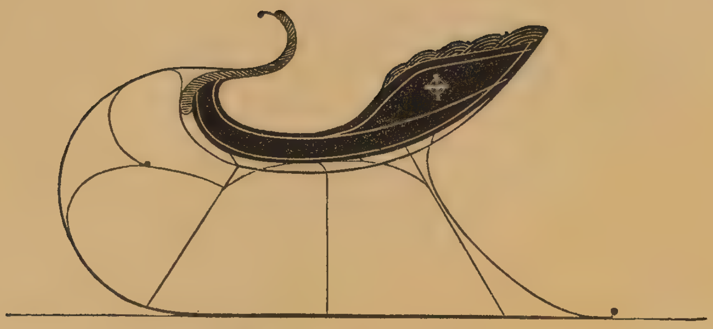
SCHUYLER COAL-BOX.

Plate No. 46.—Half-inch Scale.—Explanation on Page 181.



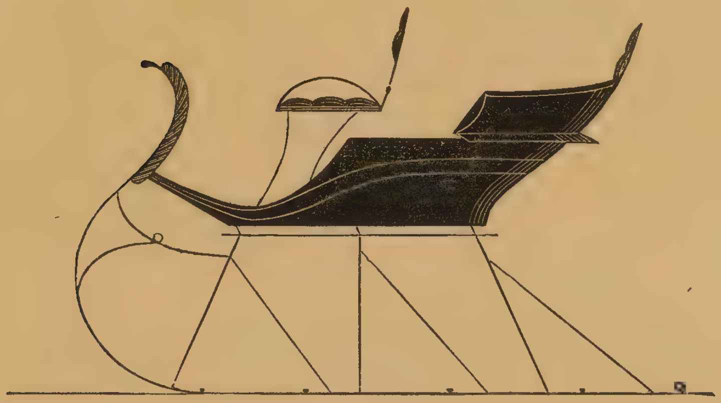
PEABODY VICTORIA.

Plate No. 47.—Half-inch Scale.—Explanation on Page 181.



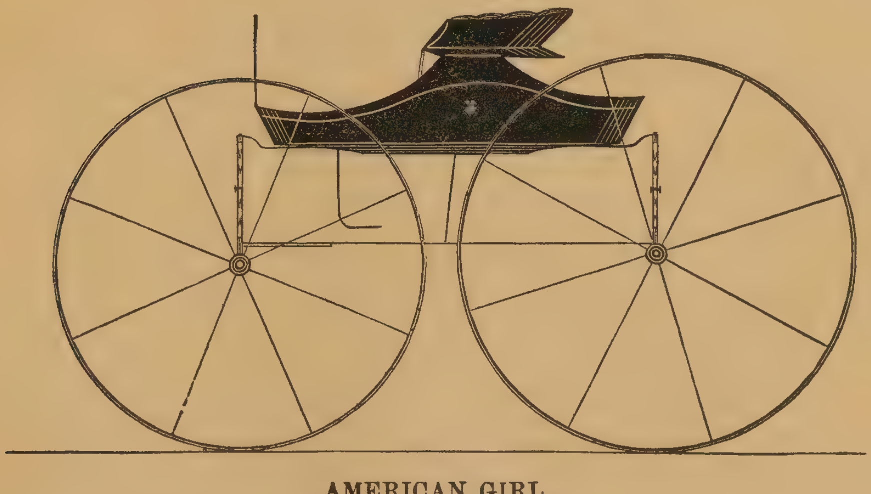
KENNEDY SLEIGH.

Plate No. 48.—Half-inch Scale.—Explanation on Page 182.



BATH JUMP-SEAT.

Plate No. 49.—Half-inch Scale.—Explanation on Page 182.



AMERICAN GIRL.

Plate No. 50.—Half-inch Scale.—Explanation on Page 182.

large addition to their manufactory since 1863, one would think they now had sufficient room for all time to come.

This firm has the largest and most perfectly arranged shop in the city, and, by the quality and style of their work, have built up an enviable reputation.

John W. Gosling, also, has a wide reputation for turning out first-class vehicles, and, in our recollection, has raised himself from a small business, in the upper part of the city, to a prince among carriage makers.

Curtis & Bingham are rapidly reaching the position attained by the older firms, and, through the sale of their patent buggy, are attracting a good share of the best customers.

Chas. Behlen, who has lately greatly enlarged his shop, is another builder, who is making his mark, and who will, in time, secure a large trade.

John Roberts, Handy & Shannon, Niemyer & Son, Geo. Jacob, Veerkamp, and others, are building good work.

We were allowed free access to all the shops in the city, and were cheered by words of praise bestowed on the Journal, by the very best judges.

We took a large list of names, which was not a cause for regret although an ordinary matter with us.

We called over at Covington, Ky., and raised a club in Hegge & Brinker's shop. Here, also, we met old acquaintances, and well nigh had our shoulder dislocated by the hearty hand-shaking of the Kentuckians.

June 29th, we took our departure for Indianopolis, and afterwards visited Dayton, Columbus and Pittsburg, reaching Philadelphia, July 7th.

Three months of continual travel, without an accident of any kind, called forth our gratitude to a kind Providence; and, as we stepped out of the depot, safe, safe at home, our feelings can better be imagined than described.

To our friends everywhere we would return our heartfelt thanks, at the conclusion of these imperfect "Notes by the Way." C. W. V.

INTERNATIONAL INDUSTRIAL EXHIBITION.

"Under the management of the Mechanics' Institute, of Buffalo, N. Y., arrangements are being made for the holding of an International Industrial Exhibition, commencing on Wednesday, the 6th day of October next, and continuing through the month.

"The design in this undertaking is to inaugurate a permanent series of exhibitions, at which the mechanical art of the United States and Canada, in all its departments, shall be shown upon a large scale, under the most favorable circumstances for studying it comparatively, and for subjecting its productions to the most competent criticism and judgment. Application has also been made to the Secretary of the Treasury to permit articles from Canada to be bonded and returned free of revenue dues.

The above is a portion of the contents of a circular received from Buffalo, N. Y. Our readers will no doubt take a lively interest in a movement of this character, as it is well calculated to awaken a laudable competition, and result in diffusing a vast amount of valuable information.

Pamphlets containing full information will be sent on application to David Bell, President, or O. J. Swegles, Acting Secretary, International Industrial Exhibition.

GLEANINGS.

George C. Miller & Sons, of Cincinnati, have a novel shaped velocipede, elaborately carved and painted, which they value at $300. The frame is of wood, carved and painted in imitation of two rattle snakes, their heads reaching forward of the steering pillar, as in the act of striking, and their tails twined together back of the hind wheel. The seat and other parts are similar to other machines of the French pattern, but arranged and proportioned with better taste. * * The Great Southern Railroad Bridge, which crosses the Ohio river near the Falls, is about complete. * * The treaty trees are still flourishing at Vincennes, Ind. * * Alton, Ill., is one of the deadest towns that lies out of doors. We didn't see a box of goods, a man, or a nigger boy with a bundle, on the wharf or at the depot while there. * * The city of Louisville, Ky., is growing rapidly. A promenade through Sixth street, Broadway and other avenues, will convince any one that these streets will not suffer in comparison with those of any of our large cities. Underwriters have stated that the fire department is the most efficient of any in the West. * * The finest milk wagon we have ever seen was built by Bremerman & Renner, of Indianapolis, Ind. * * The State House at Columbus, Ohio, should be visited by every one who contemplates passing through or near to that city on their way West. * * Dealers in carriage materials report lively sales within the last week or two. * * A man who was selling pop-corn at Bloomington, Ill., recommended it by the following rhyme, which he sang with a sharp drawling nasal twang:

"Oh, hure we air, oh, toodle whack,
Selling pap-curn by the pack,
It's better than brandy, rum or wine,
Who'll have a sack for a half a dime?
Have a sack?"

NEW ADVERTISEMENTS.

Valentine & Co.—It is seldom we find men of more enterprise than the above firm. Having successfully introduced the Permanent Wood Filling, patented by Piotrowski, and revolutionized the system of coach painting from one end of the country to the other, they are again reminding the public that they continue manufacturing the same Varnishes that have for years past stood so high in the estimation of first-class builders throughout the country. Not being content to excel all American manufactures, they claim to have a varnish equal to the best English. This, of course, is to be more fully tested before it will be generally received by the public. There are manufactures that are trying their utmost skill in this direction, and we believe American ingenuity will, (if it has not already,) effect the desired results.

Messrs. V., not only use every means of improvement in all they have to do with, but avail themselves of the opportunities of making themselves known to the public, and in a way to be sure to attract attention, in proof of which see their *two page* advertisement in this number.

Important Public Sale of Carriages and Stock.—Henry Pretzschner, of Wilmington, Delaware, being about to retire from business, will offer his entire stock of carriages, finished and unfinished, tools, &c., at public sale, on the 22d September next. Being one of the largest establishments in this noted city, it is well worthy the attention of dealers and manufacturers. For further particulars, see advertisement in Journal.

Thomas Spurrier, of Sharon, Pa., is introduced to our readers as the patentee of an improvement in axles. The cut in advertisement will give a better idea than can be expressed, and all interested will therefore apply in person or by letter to the patentee.

Charles Palm & Co., Cincinnati, O., seem to be trying to take the lead in importing transfer ornaments, and if what we hear from those using them be true, they are of a very superior quality. His book of 100 ornaments has found a ready sale, and is certainly valuable as a book of desings. We have a few copies left. Price 50 cents.

Fashion Plates Explained.

SCHUYLER COAL BOX.

Plate No. 46.—This is a plain, neat style of body without mouldings, concave on the lower edge.

Dimensions.—Width of seat: 30 inches, to take 3 feet 7 inch bows. Hubs: 6 by 3½. Bands: front, 2⅜; back, 2⅞. Spokes: ⅞. Axles: ⅞, steel. Tire: ¾ by ⅛. Wheels: 4 feet and 4 feet 2 inches. Track: 4 feet 10 inches.

Trimming.—Brown cloth.

Painting.—Body: panels black, concave and seat skirt lake, edged with ⅛ line of gold. Carriage part: black, centered with ⅛ line of gold.

PEABODY VICTORIA.

Plate No. 47.—A beautiful design. The back quarter has lines similar to the Victoria. and taken as a whole presents a light and graceful appearance.

Dimensions.—Width of body to take 3 feet 11 inch bows, and for further instructions we refer you to the cant given in the department headed "Pencil, Rule and Square."

Hubs: 4⅜ by 6½. Front band: 3⅛; back: 3⅝. Spokes: 1⅛. Tire: 1 by ¼. Axles: 1⅛. Wheels: 3 feet 4 inches and 3 feet 10 inches. Track: 4 feet 10 inches. Springs: 1½, 4 plates.

Trimming.—Brown French morocco and brown cloth.

KENNEDY SLEIGH.

Plate No. 48.—This is a good style of Albany cutter, very light and graceful, and when properly constructed will be serviceable as well as attractive.

Dimensions.—Width of bottom side, outside: 2 feet. Fenders: frame, 9 inches outside of bottom side. Track: 3 feet 3 inches. For further description, see Plate No. 43 in the August number.

Trimming.—Purple plush.

Painting.—Body: Munich lake, bordered with Milori green, edged with gold. Runners: black, elaborately scrolled and striped with gold and colors. The scrolls may be transferred. These can be obtained of Chas. Palm & Co., of Cincinnati. The body panels may also be scrolled and connected with stripes.

BATH JUMP-SEAT.

Plate No. 49.—An original design by our draftsman, which will be found in the manner of constructing the body to possess points of originality. As a single sleigh it is more compact, bringing the back seat forward, and thereby shortening the distance between the horses and driver. Sides: slight concave, or plain side moulded.

Dimensions.—Width on seat: 30 inches. Track: 39 inches, steel shoes.

AMERICAN GIRL.

Plate No. 50.—A very neat body, with curved lines back and front each way from the centre. It is intended to replace the deep square bodies which have been so fashionable.

Dimensions.—Width on seat: 20 inches. Hubs: 3¼ by 6. Front band: 2¼; back: 2⅝. Spokes: 13-16. Tire: ¾ by ⅛, steel. Axles: ¾, steel. Track: 4 feet 8 inches. Springs: 1¼, 3 plates.

Trimming.—Drab cloth, brown welting.

Painting.—Body: panels carmine, delicately scrolled, and striped with white. Carriage-part: silver bronze, striped black.

Mounting: gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

For the Coach-Makers' International Journal.

PHILOSOPHICAL AXLE SETTING.

Circleville, Ohio, July, 1869.

Mr. Editor:—I believe I have promised you another article on the above subject, and although my time is entirely too much pre-occupied to do the subject justice, I will throw in my mite toward solving this perplexing question.

First, however, allow me to make a correction or two in my former article.

I intended to say 1-40x⅛; that is, that the two fractions should be *added*, (not multiplied,) to to make 1-5th of an inch difference between the pitch of the two axle arms.

And in the closing paragraph, I intended to say: Should this article prove acceptable, I will give my views on the subject in a subsequent article; it having been my object in *this* to awaken thought, and show the fallacy of the *universal* "plumb-spoke theory." With these corrections we will proceed with our article.

There is, perhaps, no subject, (take it in all its bearings,) in the whole range of what we might term *philosophical mechanics*, that is more difficult to understand and demonstrate than that of axle setting, and I feel that I am attempting a difficult task; although, according to the theories of many of my brother chips, the thing is quite easy, as most of them have but one idea on the subject, which embraces and at once settles the question for all kinds of axles and wheels, without any regard to the multifarious changes in the dish of wheels, taper of boxes, &c. For instance, Mr. A. says that, "the centre of the tire, (in *all* cases, I suppose,) should be under the centre of the box." Mr. B. "that all axles, (without regard to dish of wheels or taper of box,) should be made straight on the bottom." Mr. C. (H.) "that *all* wheels should be set, (also without regard to dish or taper of box,) with the *face edge* of the spoke plumb," and Mr. D. has it that the proper way to set wheels is, "to balance the wheel on a three-cornered file."

Thus each one has his "par excellence" one idea theory, and claims that it is, beyond doubt, correct; and they might, possibly, *all* be right in certain cases, but I cannot think any of them can be right in *all* cases. But it is not my present object to discuss the merits or demerits of these and kindred theories, but to set forth what I believe to be the true and correct theory of axle setting.

And allow me here to say, that I do not wish to be understood as dissenting, in toto, from the "plumb-spoke" theory, but from *the universal and-never-to-be-departed-from theory*, and especially as advocated by Mr. Harper, that *all* wheels, no matter what relation the dish of the wheels and taper of the boxes bear to each other, should be set with the *face* edge of the spoke plumb. But, to the question, how must wheels be set so that the box in each case will have the least possible friction on the axle arm?

In accordance with the heading of this article, we will look at this question in a philosophical light, which will also compare favorably with my "experience and observation" for some years past. Let us understand, before proceeding further, that the great object to be attained is to have such a construction that the box will *play* with perfect freedom on the axle, and to do this the pressure must be, in all cases, so distributed on the axle arm as to allow the box to incline, with equal freedom, to the nut and collar of the axle.

To obtain this end, the axle arm should be made straight on the botton, when the dish of the wheel, (to bring the centre of the spoke plumb,) and the taper of the box are the same, and the spokes are in the centre of the hub. But if the taper of the box and the dish of the wheel are not the same, then the axle arm should *pitch*, either up or down, (as the case requires,) just one-half of what would be required to make the spoke plumb by the centre.

From the above principles it will be seen, "that the less taper to the box, the less swing," and *vice versa*. The same rule also applies to the "gather."

What we mean by the *taper* of the box is the taper of one side of the box, which is measured by *half* the difference of the two ends of the box. Thus, if the box is three inches at the point, and four inches at the butt, half of an inch is the taper of the box, or rather the measurement of its taper. What we call the *dish* of the wheel, to bring the centre of the spoke plumb, is the dish proper, measured either at the *outside* or *centre* of the hub, *added* to *half* the difference between the width of the spoke at the hub, and the width of the tread of the wheel. Thus, if the spokes are 2½ inches wide, and *tread* or tire 1¾ inches wide, and dish proper ¾ of an inch, then the dish, to bring the centre of the spoke plumb, will be 1⅛ of an inch. We will now take an example for illustration:

Wheel, 4 feet 7 inches high; hub, 9 by 12 inches: box, 2¾ inches by 3¾ inches; spokes, 2⅜ inches wide at hub, and 1¾ inches tread; dish of wheel at outside of hub, ⅝ of an inch. Then the dish to calculate from, to bring the centre of the spoke plumb, will be 15-16ths of an inch, and to the centre of the hub or box, 1⅛ of an inch.

This will bring the axle straight on the bottom; for the length of the spoke is to the dish, as the length of the box is to the measurement of the taper of the box, that is 22½ inches : 15-16ths of an inch : : 12 inches : ½ of an inch; showing that the axle arm is to *pitch* neither up nor *down*, but to be made straight on the bottom.

In this case, we have a perfectly philosophical construction, as the pressure is equal on both ends of axle arm and box, and is in a perpendicular direction, and at right angles to the box and axle arm; the bottom of which being straight, or horizontal, will allow of greater freedom of *play* to the box, than it would have if the axle arm pitched either up or down. This construction sets the wheels 4½ inches wider at the top than at the bottom, while Mr. Harper's theory would set them only 3 inches wider.

But, this is only one case in many that arises in the experience of every wagon and carriage maker. For instance, we will suppose that the difference in the size of the ends of the box is 1½ inches, instead of one inch, then the axle arm, to make the wheel stand plumb, (as in the former case,) would require an upward pitch of ¼ of an inch. Now, if the construction was right in the first case, how can it be right in this, with every element or principle of construction changed, except that of the plumb spoke.

The centre line of the spoke no longer forms a right angle with the box and axle arm, and the main pressure being, (as in the former case,) through the centre of the spoke and not at a right, the box will crowd too much to the point of the axle.

In this case, instead of the ¼ of an inch, the axle arm should have only ⅛ of an inch upward pitch, which will throw the lower side of the wheel ¼ of an inch back, and will give the pair of wheels 5⅝ inches swing instead of the 4½ inches, as in former case; and the main line of pressure, instead of being through the centre of the spoke and in the direction of the centre of the box, is ¼ of an inch back of the centre, thus equalizing the friction by throwing the pressure slightly to the butt end of the box, so as to bear a proper relation to the ⅛ of an inch upward pitch of the axle. As has already been intimated, the *gather* should be in proportion to the *taper* of the box.

The general rule that I adopt, is to make the gather ⅛ of the difference of the size of the two ends of the box for a 12-inch axle arm, and in the same proportion for other lengths.

But time will not allow me to enter more fully, (at present,) into the merits of this important question, though before closing, I desire to say, that nothwithstanding I have made free use of the principles of geometry in determining the *relative* position of the axle and wheels; still, I do not call this *geometrical construction* in the sense that Mr. Harper uses the term; for I have not been governed, (in the position I have given my wheels,) a whit more by the principles of *geometry*, than I have by those of *astronomy*.

Hoping that Mr. Harper will give us light on this subject in the next number of your JOURNAL, and that the *united* efforts of your correspondents will tend to good results, I will close for the present. Yours respectfully,

WEBSTER THOMAS.

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 6.

BY J. H. T.

Secret writing.—Put powder of alum into water, and what you write will not appear; but put the paper into water, and then you may read it.

To write letters that cannot be discovered.—Take a sheet of white paper, double it in the middle, then cut holes through both the half sheets; cut the holes like the panes of a glass window, or any fashion you please; then with a pin prick a hole at each end; cut your paper in two halves, and give one to a friend and keep the other half yourself. When you write lay your cut paper on your letter paper, and put pins through the holes, that it may not stir; then take off the paper with the holes, after you have wrote your mind to your friend in the open spaces, and write anything you wish to fill up; and, when your friend receives the letter, let him lay the cut paper on it, putting the pins into the holes, and then what you wrote not to the purpose is covered, and he discovers your mind.

Another way.—Write the letter with common ink on one side; then turn the paper, and write on the other side with milk what you would have secret with a clean pen, and let it dry; then, when it is to be read, let the written side be held next the fire, and the milky letters will appear of a bluish color on the other side, and may be perfectly read.

To make black writing vanish.—Dissolve burnt tartar in common water, and filtrate it; strike the paper over with it, and the writing will presently disappear. To make this writing appear again, dissolve an ounce of white vitriol in a pint of water, filtrate it, strike the paper over with it, and the writing will presently appear again.

To write with ink that will vanish in five days.—Infuse an ounce of sal ammoniac about four days in strong water; make with it ink, adding a piece of touchstone, beaten fine, and what you write will be gone in five days.

Another, which will vanish in twenty-four hours.—Boil galls in hard water, put to it some vitriol, a little sal ammoniac, and a little gum arabic, and in twenty-four hours it will vanish.

CURIOUS INKS.

To make a shining ink.—Take gum arabic and Roman vitriol of each an ounce; galls, well bruised a pound; put them in vinegar made of beer; set them in a warm place; stir them often till the liquor becomes black: then add to a gallon an ounce of ivory black and a gill of seedlac varnish, and it will be a curious black, shining ink.

To make a powder ink to rub on paper.—Take about twenty nut galls, and reduce them to a fine powder; half an ounce of Roman vitriol, and as much gum arabic and gum sandarach; powder and sift them very fine; then mingle them together, and rub the paper hard with this with a piece of cotton, and polish it with a piece of ivory; write with water, and in a little time the letters you write will appear a fine black, as if written with the best ink.

For the Coach-Makers' International Journal.

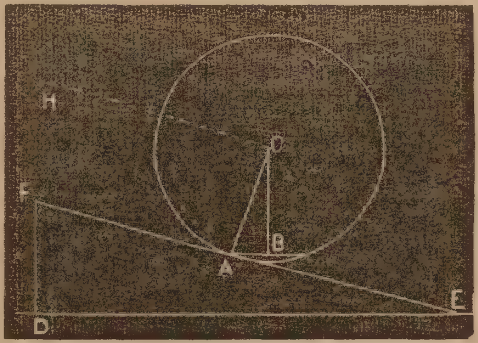
WOODEN vs. IRON AXLES.

BUTLER, ILL., August, 1869.

MR. EDITOR—The inquiry of D. and M. for a philosophic reason to sustain an idea that he says "is generally believed, that a large sized wooden axled wagon, skeined, will run easier upon an uneven road, than an iron axle which is much smaller," is a subject that has been so often brought before the public, that it certainly ought to be philosophically and practically demonstrated, if the general belief is correct.

It happens to be in my power to philosophically demonstrate the error of this belief; and being so, any person would be derelict in duty not to do it. The reason, when got at, is as plain and simple as it would be to give instructions which way to move the poise-weight on scales to make it balance a greater amount of weight on the other end. It is nothing but a question about the action of the lever, as all questions are that pertain to mechanical power. What keeps us in this state of indecision about these all-important facts, is the false theories that we are taught, under specious name of science, that in truth, above all other things, are the most fallacious.

I wish you here to insert the diagram prepared by Prof. Easterday, page 154, Vol. 3, for the COACH-MAKERS' JOURNAL. It will be remembered that Prof. E. prepared this diagram to refute an erroneous theory that I had presented in relation to the lever in a previous number. The erroneous theory was presented by me, for the purpose of calling out a scientific gentleman, who, in one of our most popular scientific papers, the *American Artizan*, had flatly declared that all the use derived from a wagon or car wheel was to reduce friction, and my assertion to the contrary was erroneous. The man intended to be drawn out refused to bite; but Prof. E. nabbed it at once, and in the article alluded to, gave a true and clear explanation of the mechanical power from the wheel, which, now, I am going to make settle the question under consideration; and another of still greater importance about the nature of the inclined plane, that just at this time is stirring up the public mind throughout the whole length and breadth of the land.



The professor truly explained this diagram as follows: that the line C A was the long arm, and A B was the short arm, and the point A on the inclined plane was the fulcrum. Every one knows that, as the long arm is to the short arm, so is the power gained. The long arm, in this case, is three times that of the short arm; therefore the gain in power is three to one.

Here let us notice a peculiarity of the inclined plane; that is, whatever number of degrees the incline is elevated, just so many degrees from the vertical line B C the wheel will touch the incline; therefore the power of the lever, which is the wheel, is precisely the same that scientific men falsely ascribe to the power of the inclined plane.

But to return to our first subject. It will be seen that our axle, C, touches the axle box on the line C A, and by that touch to the box, forces the wheel to turn on the inclined plane. The nearer to the centre, C, the longer will be the arm, C A, and consequently the power greater. If the distance from the centre of the axle to the outside, (called the radius,) be one-third the radius of the wheel in the above diagram, its size would take from the long arm of the lever, C A, one-third of its power. If it was two-thirds, two-thirds of the power would be lost. But if the axle was of such a size that it filled the wheel and touched the inclined plane at A, all signs of the arm to a lever is lost, and it is merely a drag on the incline. It will be noticed that through all the stages of increasing the size of the axle, the length of the short arm from A to B remains just the same; nor can anything be gained by increasing the size of the wheel, for that would lengthen the short arm from A to B in an equal proportion.

Now, if there was an irregularity in the surface of the ground on which the wheel trod, that obstructed its motion, (in the inquiry called "an uneven road,") and that obstruction touched the wheel at the point A, the power required to start the wheel over the obstruction would be precisely the same as to start it on the inclined plane. If the obstruction touched the wheel thirty degrees from B, the long arm of the lever would be twice the length of the short arm, and the power would be two to one either on an inclined plane, or on the first start over the irregular obstruction. The only difference between the two obstructions is, that the inclined plane is regular in its action of power, and the other is irregular.

Now, this is orthodox theory, coming from a man who has his parchment (written in Latin) from grand institutions of learning, setting forth his ability to teach everybody on such subjects, and from an opposite kind of a man, who has no particular respect for such things, believing them to be the great conservators of error of the present day. Who is going to doubt it? For my part, I believe the question settled beyond any cavil.

A good wrought-iron axle, so constructed that the greatest amount of strength can be secured with the least possible amount of weight, is the one most to be desired. Next to that, a good all wood axle, running on iron boxes, whose bearings are well polished, and made to extend the whole length of the arm, is the best. Either of them must be set so they have equal bearing.

Now, I want to call the attention of every learned and unlearned man to a certain property belonging to mechanical power.

We have what we call a combined lever; that is, a lever whose short arm is attached to the long arm of another lever, thereby increasing the power to any desired number of times. Two levers, so arranged of the foregoing power, three to one, would increase the power nine times. But here is an inclined plane, whose height is one-third its length, and which the theories of scientific men say has a mechanical power, derived from the fact that it divides velocity of motion—that increases three to one. Next we have a lever power of a wheel—turn to the foregoing diagram, and see that I state it correct—whose long arm, from C to A, is three times the length of the short arm, from A to B; yet this combination of mechanical powers produces no greater effect than one of them would singly. Just at this time a great deal is said by scientific men, because I have publicly proposed to demonstrate to any one who will look at it, that by this combination of two mechanical powers, I can gain about one-sixtieth more than is due from one of the powers. The reason why this is so, has been explained in this JOURNAL, which in no way conflicts with the immutable law of the lever.

All the trouble mechanics have about promptly and correctly deciding questions about the best size of axle arms, in a way that every one can comprehend, is the false teachings of popular theories, called science, that sets them to looking to six or seven different things whereby power is gained, called mechanical powers; when, in fact, there is but one mechanical power, and that is the lever. This is enough to distract the mechanic's mind, and lead him away from truly theorizing about the laws that really belong to the lever, and which are very simple. Take my advice for once, and disregard these dogmatic and pompous teachers, and in every case where there is a more than common strain on machinery, or a more than common gain of power, look for the cause in the action of a lever, and regulate the same, so that it produces the effect that is wanted as much as you can, and then you will be a mechanic, not only in name but in fact.

HENRY HARPER.

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,

Author of "STRAY STEPS," &c.

CHAPTER III.

> "I've traded with the Yankees,
> Brazilians and Chinese,
> And laughed with dusky maidens
> Beneath the tall palm trees;
> Across the Line and Gulf Stream,
> Off to Table Bay,
> Around the world and home again,
> That's the sailor's way." ALLINGHAM.

No one can enter the Bay of Rio, for the first time, without being impressed with a sense of pleasure by the beauty of the scenery which surrounds these "hidden waters." Even the dullest, most callous old sailor will give his quid a lurch to leeward, eject a hat full of tobacco spit, and, "shiver his toplights," if that place don't take the rag off the bush for all he ever clapped an eye on. And no wonder Charley Shears broke out into such a high-strung eulogy of its natural glories.

On the left, as you enter, is the Sugar Loaf Mountain, standing as a sentinel over the maritime mine of the Brazils; further on, the round, green summit of the Tres Irmaos is seen, and the huge sail-like form of the Gavia hides the landscape from view. On the right, a range of hills stretching away even to Cape Frio and the distant Organ Mountains; while the city itself spreads back to the Fijuca Mountains. As we pass the white wall of Fort Santa Cruz, an officer calls through a speaking trumpet, "What ship is that?" and the answer is telegraphed to the city. Our anchor is let go opposite Fort Villegagnon, which is on an island of the same name, and called after the Count Villegagnon, a French nobleman, (bless the mark,) who, in the early history of Brazil, introduced a colony of the persecuted Huguenots from France, with the assistance of Coligny, and afterwards betrayed them.

Charley and myself were among those who had never been here before, and were anxious to get ashore; as for me, the night was an awful long one; for curiosity kept me wakeful. There were thirty of us went ashore on "liberty," and under the leadership of one of our messmates who had been in Rio before, and was well acquainted, we started to see the city. But first Jack took us to see a friend of his, one Manuel Suzee, who kept a pulperee, (gin mill.) On our way we passed through the Largo de Paco, (Palace Square,) and did not think much of it; also the great Rua Diruta, which seemed to be the chief omnibus centre. Our guide, Jack, says you can take a "bus" to any part of the city from this point. All the other streets we pass through are very narrow, and I notice that all the vehicles go *up* one street; this rather puzzled me at first, seeing everything going in one direction, until we turned into another street, and I saw all the vehicles going in the opposite direction, I at once comprehended the idea. The streets are narrow, and two lines of vehicles would crowd them too much; so, by a police regulation, one street is for *up* carriages, and the other (parallel street) for those going *down*, and the cross streets the same way. An index sign on a post at each corner shows the Jehu which way he may drive, and if he attempts to stem the tide, by driving in a contrary direction, a soldier-policeman soon hauls him up. The streets are not well paved, except the Rua Diruta, which is paved with blocks of stone brought from the Isle of Wight.

Negroes do all the work here. We saw a "Rio team" hauling and pushing a wagon, or hand cart. It consisted of five strapping big fellows, doing a mule's work, (why the mule is not used, I cannot say.) These teams and the Rio coffee carriers keep the streets lively from nine to three o'clock each day, during which hours only ships are allowed to discharge their cargoes.

The coffee carriers are the finest specimen of the negro race in existence. They are all of the Mina tribe, from the Bight of Benin, and always work together in gangs of from ten to twenty, each gang under a leader. To see them coming from the custom house, each one with a 160-lb. bag of coffee on his head, the leader singing, and the gang all joining in the chorus, as they go, *at a run* (under their load) for the ships, is a sight worth seeing. They look like living models of Hercules, done in ebony, their black skins shining like they were black lead polished; for they go nearly naked. They are imbued with a deep, abiding love of country, and just as soon as ever they can, by any means, buy their freedom, they invariably return to their African wilds. To accomplish the freedom of some chief or favorite among them, they often, nay always, club their savings, to purchase him from his owner, and send him back to where

> "Close beside the sedgy brim,
> Couchant lurks the lion grim,
> Watching till the close of day
> Brings the death devoted prey."

Jack pointed out the correo geral, (general post office,) and of it I will have occasion to say more at a future time. We soon arrived at our objective point, the pulperee, or venda, before mentioned, and Jack's friend, the proprietor, received us joyfully, and soon invited the jolly tars to take something. He was throwing *a sprat to catch a mackerel*, and was whetting the boys' appetite for a good old tight, (drunk.) He knew they were out for it, and pretty soon they were making the cachaca (rum) disappear down their eager throats, and their dollars down the more eager pockets of Manuel Suzee.

I tried to get away from the crowd, but every attempt was a failure; and by this time Charley Shears was getting pretty full, and was, strange to say, the jolliest of the now half-drunken sailors. To leave them without a good excuse, would have left me liable to future annoyances, and have subjected me to have earned the name of a sneak, and the boys would have hazed me for it certain. So I had to hold on with them much against my will, for they were geting so uproariously noisy that the policeman on the beat spoke to the boss of the pulperee; but he could not stop them; and then to make it worse, there was a gang of the low hangers-on of these vendas among them, (they are called tamanca-shed, from a sort of wooden slipper worn by them.)

Pretty soon a free fight commenced between those fellows and the sailors; the police came, and took a hand; but the boys had it all their own way. Benches were broken up for weapons, tumblers flew, peelers knocked down, and the pulperee thoroughly gutted, before the row was stopped. The police succeeded in arresting half a dozen of the tamancas. Charley, "quiet Charley," was the biggest devil I ever saw when raised; he was perfectly beyond control. He knocked down the poor tamancas and peelers as if they were ten pins. The boys were delighted with him; but he came near having his cruise cut short; for, while attempting to heave one peeler through the window, another one aimed a sabre cut at him, which would have settled him, but a glass tumbler made a tumbler of the peeler, and we dragged Charley to the rear of the house, and got him out, and we soon got away from that nice locality.

I should here state that the Rio police are a semi-military organization. They wear a neat blue uniform, a fatigue cap, and sword and pistols. I suppose they might have got some of us; but they do not care to arrest men-of-wars-men, *for obvious reasons*.

After the row, finding I could not get Charley away, I took the chance to get off by myself for a ramble through the city. The number and variety of the tongues spoken astonished me. The blacks nearly all talk in Congo, the Brazilians in Portuguese, and the sailors in English. I took a ride in a gondola, (an omnibus,) to see the well-known Praia do Flamingo, where the Rio's bathe before sun-up. When I got there, it was low water, and the smell—oh wicked—it was awful. I did not then know the reason, but I found it that same night through Charley's capers. I had an opportunity to examine some of the beautiful bouquets of Indian feathers and insect flowers. These are mostly made by the Amazon Indians, from the shoulder feathers of the red macaw, whose bright, brilliant red color is not even gaudy enough for them; so they change the feathers on the live bird to a rich yellow, by rubbing the milk of a frog to the skin of the bird, and after that the feathers are said to grow yellow always. They use different colored insects and bugs to add brilliancy to the flowers; in fact, they look like gems set in roses; but like everything else, they are imitated, cheap ones being made from parrot feathers. The bogus ones are known by having their stems *green*. I saw a Rio milk peddler, whose outfit may be profitably copied even here. It was very simple, for he drove the cow and calf from door to door, and milked the beast for each customer.

Mandioca is the chief food of the Brazilians. It is curious, but true, that this cannot be eaten unless ground and the water pressed out of it. This water, or the root before being ground, is a deadly poison; it may then be used for bread, or eaten in its raw state, like flour. The Indians are very expert at this, they take a handful and toss it into the mouth without spilling a grain. The Indians also used to make a highly intoxicating liquor from it, by getting their women to chew the roots and spit into a vessel; then, when fermented, they had a "good old drunk." Nice, was'nt it?

I had often heard of, but never felt, the bite of the barachudah, a sand fly found on this coast; but now I fully agree with Midshipman Wilberforce, who wrote:

> "Ye mountains, on whose woody heights,
> The greedy barachudah bites;
> Ye forests, in whose tangled mazes,
> The dire mosquito bites like blazes."

And so they *do*.

It being nearly time to get back to the ship, I started to find my way there; but I again ran afoul of the "liberty men" from the ship, with Charley at their head, and all hands glorious. Every venda they came to they must stop and take *another one*. I was with them now, and I joined in their fun with a will, and soon we were marching down the main street, Rua Diruta, I singing "John Brown's Body," and the whole gang joining the chorus, until we made *Rome howl*. Turning into the Largo de Paco, we met a party of negroes going along, with big buckets or tubs on their heads, and the devil being in us, we hailed them, and wanted to find out what they carried; one sailor insisting they were going to market with "turtle butter," another swore they had rum aboard, and Charley insisted that they must show up what they had. The poor darks did not know a word the sailors said, and the sailors could not understand a word the darks said; but Charley remembered that our messmate, Jack, could palaver a little in Portuguese, and insisted on him being made spokesman. Jack had pulled me aside, and told me to keep clear of the crowd, if I wanted to see fun, and I done so. I had noticed an infernal bad smell during the whole time, but did not know where it came from. I suppose the few drinks I had dulled my senses; but Jack spoke some few words to the niggers, and they made a move as if to run for it, (Jack had told them to.) At the same moment he sung out, "Board them, you lubbers; get at 'em, boys, and let's see what they have." The sailors, led by Charley, made a rush for them; the niggers, scared half to death, threw their tubs at the boys, and then went. But oh what an unpleasant mistake we had made in the hopes of booty. Oaths were hurled after the retreating blacks in true sailor style; while one was calling out, where's the bay? another shouted heave me overboard, I'm ruined. Six or seven of the party were hit, and away they ran for the water, and into it, followed by the yells of the rest of us.

The negroes were the town scavengers (tigers) of Rio, who were on their way to the bay, at Praia do Flamingo, to deposit the offal of the town, which, for want of sewerage, necessitates the method mentioned.

Charley's olfactories were not highly pleased with the "bouquet de offal," and he looked rather chagrined at the turn matters had taken, as he examined his ruined clothing.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

COLOR.

BY J. H. T.

Continued from page 168.

21. You may give glass a noble golden color with quicksilver; but it is now colored yellow, generally, with calx of silver; yet shall silver, such as is generally used with pen and pencil, mixed with a convenient proportion of powdered glass, in three or four fusions, give a lovely sappharine blue.

22. Glass is tinged green by the glass men with calx of venus, which calx, mixed with a hundred times its weight of fair glass, gives, in fusion, a blue colored mass.

23. Putty, which is tin calcined, as it is white of itself, so it turns the purer sort of glass metal into a white mass, which, when opacous enough, serves as a white enamel.

24. White enamel is, as it were, the basis of all those fine concretes, which goldsmiths and several artificers use in the curious art of enameling; for this white and fusible substance will receive into itself without spoiling them the colors of divers other mineral substances, which, like it, will endure the fire.

25. Glass is tinged blue with the dark mineral called zaffer or zaffora; and with manganese, in a certain proportion, glass may be tinged of a red color, and also of a purplish or murry; and with a greater quantity, into that deep color which passes for black.

26. Yellow orpiment, sublimed with sea salt, yields a white and crystalline arsenic; arsenic, calcined with pure nitre, being duly added to venus in the fusion, gives a whiteness both within and without.

27. Lapis calaminaris turns venus or copper into brass.

28. Zinc, duly mixed with venus, when it is in fusion, gives it the noblest golden color that was ever seen in the best gold, but it will not endure various meltings.

29. Copper dissolved in aqua regia, will, though not commonly known, dye horn, ivory and other bones, of a durable purple color.

30. Lastly, crystals of silver made with aqua fortis, though they appear white, will perfectly dye the skin, nails, hair and bones, with a black not to be washed off.

OBSERVATIONS ON VEGETABLE COLORS.

1. A strong infusion of galls filtered, mixed with a strong and clear solution of vitriol, makes a mixture as black as ink, which, with a little strong oil of vitriol, becomes transparent again; after which, by the affusion of a little quantity of a strong solution of salt of tartar, it regains its black color. The first black, although pale in writing, yet, being dry, appears to be good ink.

2. A decoction of red roses dried in fair water, mixed with a filtrated solution of blue vitriol, makes a black color, and this being mixed with a little aqua fortis, turns it from a black to a deep red, which, by the affusion of a little spirit of urine, may be perfectly reduced to a thick and black color.

3. Yellow wax is whitened by dissolving it over the fire in spirits of wine, letting it boil a little, and then exhaling the spirit; or else, while it is hot, separating it by filtration.

4. Fair water, mixed with a blood-red tincture of benjamin, drawn with spirit of wine, immediately makes it of a milk-white color.

5. Blackness may be taken away with oil of vitriol; so black pieces of silk or hair may be turned to a kind of yellow.

6. A handful of lignum nephriticum rasped, infused in four pounds of spring water, yields between the light and the eye an almost golden color, except the infusion be too strong; but with the eye between the light and it, in a clear phial, a lovely blue as it is. This, with the spirit of vinegar may be made to vanish, still keeping its golden color, and afterwards, with oil of tartar per deliquium, may be restored again.

7. Cloth dyed with blue and woad is dyed into a green by the yellow decoction of leuteola.

8. Syrup of violets mixed with a high solution of gold in aqua regia produces a reddish mixture, and with a high solution of filings of copper in spirits of urine a lovely fair green.

9. Syrup of violets, mixed with a little juice of lemons, spirits of salt, vinegar, or the like acid salt, will immediately become red; but mixed with oil of tartar, or a solution of potashes, will, in a moment become a perfect green, and the like in the juice of blue-bottles.

10. A good quantity of oil of tartar, put into a strong solution of verdigris, gives a delightful blue, which may be variously changed by adding of urine or hartshorn.

11. Although red roses, hung over the fume of sulphur, lose all their redness and become white, yet the oil of sulphur, which is nothing but the fumes condensed, doth wonderfully heighten the tincture of the same.

12. Cochineal will have its color far more heightened by spirits of urine than by rectified spirits of wine; and one grain of cochineal, in a good spirit of urine, being put into a 120 ounces of water, will tinge it, which amounts to about 125,000 times its own weight.

13. Twenty grains of cochineal, being mixed with an ounce of saccharum saturni, will make a most glorious blue or purple color; and so, accordingly as the quantity is increased or diminished, so the purple will be deeper or lighter.

14. A few grains of cochineal, being mixed with the lixivium of quicklime in a due proportion, make a purple color of the greatest glory imaginable.

15. The juice of privet berries, with spirits of salt, is turned into a lovely red; but with a strong solution of potash, into a delightful green.

16. Spirit of salt makes no considerable change, but rather a lighted red upon things red by nature, as syrup of cloves, gilliflower, juice of buckthorn berries, infusion of red roses, brasil, &c.

17. Juice of jasmin and snow-drops will turn into a deep yellow, with a greenish tinge, by a strong alkaline solution, although the juice of jasmin, &c., before were of no color.

18. Buckthorn berries, being gathered and dried, are called sap berries, which, being infused in alum water, produce a fair yellow, which was formerly used by bookbinders for the edges of books, and to color leather also. Being gathered when they are ripe or black, they are called sap green, and make a green color, being put into a brass or copper vessel for three or four days, or a little heated upon the fire, and mixed with alum in powder, and pressed out, and then put up to dry. When they are dead ripe, and fall off, they yield a purplish color.

19. Tincture of cochineal, diluted ever so much with fair water, will never yield a yellow color. A single drop of a deep solution in spirit of urine, diluted in an ounce of fair water, makes a fair pink or carnation.

20. Oil or spirits of turpentine, digested with pure white sugar of lead, yields, in a short time, a high red tincture, which chemists call balsamum saturni.

21. Spirits of salt, dropped into a strong infusion of cochineal, or juice of black cherries, makes perfectly a fair red; but, dropped into the infusion of brasil, a kind of yellow. So the filtrated tincture of balaustin, mixed with good spirits of urine, or the like, turns to a darkish green; but with spirits of salt, a high redness, like rich claret wine, which color may, in a moment, be destroyed, and turned into a dirty green, by spirits of urine.

22. A high infusion of lignum nephriticum, mixed with spirits of urine, produces so deep a blue as to render the liquor opaque, which, however, vanishes after a day or two, and leaves the liquor of a bright amber color.

23. Infusion of logwood in fair water, mixed with spirits of sal-ammoniac, immediately turns into a deep rich lovely purple; two or three drops are enough for a spoonful; let the color be so deep as to be opaque.

24. Spirits of sal-ammoniac will turn syrup of violets to a lovely green.

25. An infusion of litmus in fair water, will, in a clear glass, give a purple color, but will be wholly changed into a beautiful yellow by spirits of salt being added.

26. The infusions and juices of several plants will be much altered by a solution of lead in spirits of vinegar: it will turn the infusion of red rose leaves into a sad green.

(TO BE CONTINUED.)

For the Coach-Makers' International Journal.

WELL-DIRECTED ENERGY.

MR EDITOR:—I read with some interest the article contributed by C. B. S., in the August number of the JOURNAL, entitled, "Labor, Mental and Physical," and as one idea generally follows in the wake of another, I feel desirous to see something in print bearing upon well-directed labor, which is synonymous with well-directed energy, and as I have never written for the press or JOURNAL, or aspired to be a scribe, for reasons which directed my attention in another course, I nevertheless feel impelled to make a few remarks on the subject of energy well directed, for the benefit, perhaps, of many inexperienced novices, who are about to apply it to their disease—ambition. A man may possess all the energy of Napoleon, and fail to secure the results so often attributed to it. The world is full of men who exert their nervous powers to such an extent as to unhinge their minds, and leave them walking imbeciles, and finally raving lunatics.

It seems to be reducible to a system. Napoleon and other great men exhibited sufficient energy to craze a score of men with less judgment. An energetic movement, executed with good judgment, is what leaves the mind free and untrammeled by those complications so harrowing to rash and heedless mental workers. It is not energy that wins the race in life, for an individual possessed of it prominently ends his life, in nine cases out of ten, in misery. Energy, with a proper cultivation of the perceptive and reasoning faculties, gains the goal, and shows to us those men who have apparently exerted themselves the least, and who manage the affairs of business and life with so much ease and success. Two young men starting in business, who are equally energetic, and consequently apparently as capable of conducting it successfully, may illustrate the case, by one becoming peevish, cross and nervous, and therefore unsuccessful, while the other will become more good natured, mild and stable, and hence successful. How essential, therefore, to cultivate the lacking faculties in order to insure tranquility of mind, goodness of heart, and success in business, and finally a home in heaven. Respectfully, W. J. McC.

* * *

For the Coach-Makers' International Journal.

MIDDLEBURY, VT., August 6, 1869.

MR. EDITOR:—I have certainly been amused, if not instructed, in reading certain articles in your JOURNAL, and if I had the pen of a ready writer I should like to pick a bone with some of your correspondents occasionally.

At present I will only say that I have *no sympathy* with the idea of the expansion of tires, as spoken of in the June number, page 138, and if the writer of that article will go on the street in Philadelphia, and examine the first ten wagons or carts he meets which have tires very much worn, and does not find that nine out of ten of them are worn more on the inside than on the outside, I will invite him to Vermont to examine the wagons used on our mountain sides, and assure him he will find them *so* worn here.

The inside will be worn to a thin edge, while the outside will be scarcely rounded. This fact is sustained by philosophy as well as by experience. Tires are worn mostly by sliding sidewise off stones, &c., in the road, and as the wheel on the lower side of the road has nearly, if not quite all of the load on it at times, it is evident that the tires must be worn or ground off more on the inside.

Mr. Harper, in the July number, page 152, states a fact upheld by experience, to which allow me to add one or two. Six years since I made a wagon, which was sold to Chas. T. Partridge, of East Middlebury, Vt. He used it two years on the sides of the Green Mountains, for lumbering, when it was brought to the shop for new tires, not a penny has been laid out on it for repairs. In a little less than two years he came back for the third tire, which is now in use, though nearly worn out. And this is true of others I might name. I have invariably found that the old tires are worn to a thin edge on the inside, and rounded on the outside; the thickest part being about one-third the distance from the outside, and none of them expanded enough to need re-setting. I should never excuse my wheel maker for the failure of his wheels, and lay the blame to the expansion of the tires, especially on the outside.

Take a 6 inch axle, (see page 139,) 4 feet wheel, with ⅛ taper, and set the axle straight on the bottom, and you move the centre of the axle only 1-16 down; the bottom of the wheel but ¼, and not ½ an inch.

On steaming or boiling hubs I agree with "Victim," on page 121. To make a good wheel give me a *dry hub*, and I care not how the timber is; (good wheels have been made with iron hubs.) *Dry spokes*, warm or heat the end of tenon, when driving, which will soften the timber, and leave the glue in the best state when the spoke is in its place. The mortice in hub to be tapered more than the spoke, so that the point of the spoke will be pinched more than it is at the shoulder, on outside of hub.

With reference to the time of year best suited for cutting timber to prevent powder-post, there is a great diversity of opinion. Some says February, others the dark nights in August. I think it little like planting cucumbers in the moon. I have had good success planting in my garden; have never tried the moon; yet I think there is a little philosophy in cutting timber in one of the warm months of the year, as the sap will *sour very quick* in warm weather, and that is a perfect preventive. Yours, truly, I. A.

Pencil, Rule & Square.

D. BOARD, EDITOR.

PART TENTH.

BY A PRACTICAL CARRIAGE ARCHITECT.

THE MANNER OF CONSTRUCTING THE PEABODY VICTORIA PHÆTON.

FASHION PLATE NO. 47, WITH SIDE ELEVATION, AND CANT.

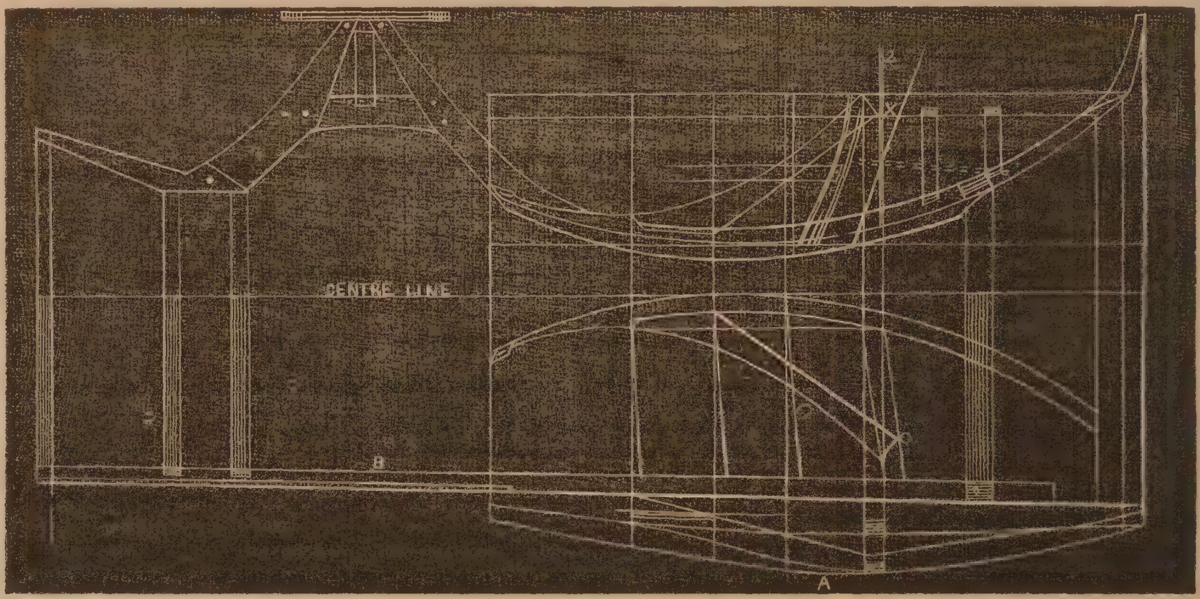
This drawing illustrates the manner of constructing a light Victoria phæton.

Having the outlines of side elevation gracefull drawn, and patterns complete, proceed and draw the centre line.

You will notice, in the diagram, we have drawn the bottom side and front pillar in an opposite direction from side elevation, our object being to show the manner of lengthening the front pillar. This is done by first drawing line No. 1 parallel with the turn-under; then, with your dividers, take the distance from line No. 1 to line No. 2, and, at point X, transfer this distance one point to line No. 2; the other point establishes line O. This will give you the required length of the pillar, when placed in its position.

Half the width of body is 23½ over all, and is contracted 6 inches, which throws all the different pieces on a bevel. This bevel is obtained from line B, being the face of the rocker, to any of the perpendicular lines. This bevel you use for marking the bottom sides and rockers, shoulders to cross bars, by beveling the ends, and marking with the pattern on both sides for dressing.

For establishing the lines and different points of the cant, we will refer you to former explanations in this department.



SIDE ELEVATION AND CANT—PEABODY VICTORIA.

SCALE DRAFTING.

(Continued from page 170.)

Having completed our list of instruments, we will now proceed to give the material necessary for a perfect draft.

BRISTOL BOARD.

We can recommend Reynold's superfine drawing boards—the largest size being the thickest in quality.

Foolscap, 15 inches by 12.
Demy, 18 inches by 14.
Medium, 20½ inches by 15½.
Royal, 22½ inches by 17½.
Imperial, 28 inches by 20.

This you will cut to the size of scale required.

There is also a tinted paper that comes in various colors, and there is the tinted Bristol board, which comes the same size, and is preferred by some, being not so easily soiled by handling. You will also need the finest French vegetable tracing paper; this is used to lay over your draft, and tracing from the original for transmitting in letter.

Faber's pencils, No. 4.

INDIA RUBBER.

Best patent rubber for artists' use, cut in diamond shape.

INDIA INK,

Which comes:—Lion Head Ink, Round Gilt Ink, Large Square Gilt Ink, Large Octagon Ink, Liquid Gold Ink. In preparing it for use, dip the cake in clear water and rub it with your finger, allowing it to drop into your saucer; this prepares it free from grit.

BRUSHES.

For brushes, you will require fine brown sables in quills, brown dyed sables in tin ferrules, with handles.

WATER COLORS.

In water colors, we give the entire list, Winsor & Newton's, which comes in whole and half cakes; or moist water colors, which retain, from processes and treatment known only to themselves, their solubility and dampness for an unlimited period, and a box of them, though laid aside for two or three years, will be found, when required again, equally moist and serviceable as when purchased.

Antwerp Blue.
Bistre.
Burnt Sienna.
Brown Pink.
Blue Black.
British Ink.
Brown Ochre.
Burnt Roman Ochre.
Burnt Umber
Chrome Yellow, 1, 2 and 3.
Cologne Earth.
Dragon's Blood.
Emerald Green.
Gamboge.
Hooker's Green, No. 1.
Hooker's Green, No. 2.
Indigo.
Indian Red.
Italian Pink.
Ivory Black.
King's Yellow.
Lamp Black.
Light Red.
Neutral Tint.
Naples Yellow.
New Blue.
Olive Green.
Orpiment.
Prussian Blue.
Prussian Green.
Payne's Gray.
Raw Sienna.
Raw Umber.
Roman Ochre.
Red Lead.
Red Ochre.
Red Chalk.
Sap Green.
Terre Verte.
Vandyke Brown.
Venetian Red.
Vermilion.
Verditer.
Yellow Ochre.
Yellow Lake.

Sepia.
Warm Sepia.
Roman Sepia.
Brown Madder.
Constant White.
Chinese White.
Indian Yellow.
Crimson Lake.
Scarlet Lake.
Purple Lake.
Mars Brown.
Mars Yellow.
Scarlet Vermilion.
Chalon's Brown.
Black Lead.

Cobalt Blue.

Green Oxide of Chromium.
Lemon Yellow.
French Blue.
Pink Madder.
Rose Madder.
Intense Blue.

Mars Orange.
Pure Scarlet.
Burnt Carmine.
Smalt.
Purple Madder.
Ultramarine Ash.
Carmine.
Gallstone.
Cadmium Yellow.
Orange Vermilion.

Ultramarine.
Ditto. Quarter Cake.

PERMANENT CHINESE WHITE.

Prepared only by Winsor & Newton. The white oxide of zinc is pronounced by the highest chemical authorities to be one of the most unchangeable substances in nature. Neither impure air, nor the most powerful re-agents, affect its whiteness. It is not injured by, nor does it injure any known pigments.

The great body it possesses gives it the property of drying on paper of the same tone as it appears when first laid on, and thus, when used, either alone or in compound tints, it does not deceive the artist, like other whites, by drying up three or four tones higher than when wet.

ILLINOIS, Aug. 8th, 1869.

MR. EDITOR:—Will you explain the construction of the dash, more particularly the upper part on plate No. 43, (Saco,) through the columns of the JOURNAL. Also, please state the distance apart that the runners are at the top of dash, and how the upper panel is put on, whether it projects from the runner or not?

Yours, &c., J. C.

ANSWER.—The dash panel is placed in a groove cut in the runners, width at top 20 inches. The side wings iron frame, 6 inches wide, covered with patent leather.

WYALUSING, PA., July 29, 1869.

MR. EDITOR:—I wish to know your opinion in regard to glue; which is the best, white glue, commonly called fish glue, or the colored common glue, for putting together bodies, wheels, &c. Please insert answer in the JOURNAL. H. S. C.

ANSWER.—In the use of glue the object is to cement together the parts of the work brought into contact in an enduring manner, and it is of the first importance that a glue be obtained which has the greatest tenacity. In our experience, we have found that white glue does not possess the adhesive quality to the same degree obtained by the use of the colored common glue.

We have never seen the white glue used except for light work, such as canvassing, and do not think it strong enough for any other part of a job.

Wheel-Horse and Mallet.

SPOKE SHAVE, EDITOR.

I am pleased that my attention has been called to the proportions of the hub; but, at the same time, I feel it to be next to an impossibility to lay before the readers of the JOURNAL such proportions as will suit every one, especially if Bro. V. Ulcan's, as submitted in JOURNAL No. 9, be a criterion for me to judge of the taste or fancy of the many employers. Should I, in submitting what I conceive to be a nicely-proportioned hub, fail to come up to universal expectation, would that failure be set down to the right that all men have, to choose for themselves that which meets their fancy? In my effort to meet the request of V. Ulcan, I will, to the best of my judgment, as gathered from experience, submit the following:

Length.	Diameter.	Front End.	Back.	Size of Mortices.	No. Mortices.	Spoke.	Rim.	Tread.
6	3¼	2¼	2⅝	¾x5-16	14	⅞	1	¾
6½	3½	2⅜	2¾	¾x5-16	14	⅞	1	¾
6½	3¾	2⅝	3	⅝x⅜	14	1 1-16	1	⅞
6½	4	2¾	3⅛	⅞x⅜	14	1⅛	1⅛	⅞
7	4¼	3	3⅜	1 1-16x⅜	14	1⅛ or 1 3-16	1⅛	1
7	4½	3¼	3⅝	1⅛x⅜	14–16	1¼	1¼	1⅛
7	4¾	3⅜	3¾	1¼x7-16	14–16	1⅜	1⅜	1⅛
7½	5	3½	3⅞	1¼x7-16	14	1⅜	1⅜	1¼
7½	5¼	3¾	4⅓	1¼x½	14	1⅜	1⅜	1¼
8½	5¾	4	4½	1½x9-16	14	1½	1½	1⅜
9	6	4¼	4¾	1⅝x9-16	14	1¾	1¾	1½

It will be borne in mind, that the sizes taking in the one-eighths will be regulated by the size next the largest—to illustrate, we will name the four-inch hub. We would make the three seven-eighths the same on front and back, with the same size of mortice, same size spoke, same *number* of mortices and depth of rim, and the same on the tread. In the use of the different sizes of wheels, as above, the wheeler will be governed in his proportions by the heft of the carriage part and body. It is sometimes the case, that patrons desire a heavier wheel in appearance; if, in such cases, the wheeler can use the same material and the wheel present a size heavier in appearance, or the same, should it be desired, to be lighter. These are matters that strictly belong to the trade, and should alike be understood by the employer and employee. There is another very important matter in the use of wheels or hubs, and that is, the size of the axle or box. We should avoid getting less in the length of the tenon in the hub than what we have in the rim, if we would avoid the effects of the rim binding. If we have more tenon in the rim than we have in the hub, with the dampness that penetrates the tenon from under the tire, causing the same to swell, you can readily perceive the advantages it has over the tenon in the hub. There is yet another reason, when we consider that the hub, being nearer the centre of the revolution, it is first attacked with the concussions or the labors of the wheel, if the wheel is the least rim-bound. When concussion strikes the wheel, this binding of the rim tends to lift the spoke from out of the hub. When the lower or ground part of the wheel is doing the labor, it forces the tenon in rim and in the hub to its proper position, consequently, the upper portion is forced up just the amount of the binding on the rim, the result is, the spoke must work in the hub and not on the rim. This is the cause of so many wheels being pronounced worthless, when the real fault is not with the work as performed by the wheeler; and I would here say, that too many employers attach too little importance to this subject, by not watching, with a jealous eye, their work when it first goes or is turned out, when possible so to do.

They should make themselves acquainted with these important facts for their own especial benefit, as protecting their own reputation.

Time and proper study alone will remove the evil, and it is to be desired, that through the columns of the JOURNAL, these questions will continue to be discussed by abler exponents than your humble servant.

Putty-Knife and Paint-Brush.

P. ALETTE, EDITOR.

THE ART OF COACH PAINTING.

(Continued from page 170.)

Having given, in the previous numbers, a detailed description of the tools and appliances to assist the painter in his laborious work, we now approach a more difficult part of our instructions, viz: the compounding of colors. But before we use the palette knife, it will be proper to give the names and qualities of the pigments used.

The carriage painter does not need a great variety of paints or colors to complete a vehicle, so that it will be acceptable to those of refined taste. Should he employ only black, without a stripe or ornament, he may produce a piece of work which will please the eye and satisfy the majority of persons. In our opinion, dark colors are far more in accordance with good taste than the gaudy ones which have been in use of late years. But we must be governed by the fashions, very often, without regard to our better judgment.

The colors generally found in a respectable carriage paint shop may be divided into three classes, viz: those more commonly used for the rough coatings, such as—1st. Keg or wet lead, dry white lead, whiting, yellow ochre and red lead. 2d. *Ground colors*, or those which the painter uses in combination with other pigments, as chrome yellow, Indian red, raw umber, chrome green, Prussian blue, lampblack, dropblack, &c. 3d. *Panel colors*, as carmine, lake of various hues, ultramarine blue, verdigris, milori green, &c., &c.

Keg or wet lead is of the first importance in the paint shop, for it is not only used as the foundation, but enters largely into the mixture of various colors used, as drabs, straw and stone colors, &c.

The "permanent wood filling" has superseded it as an article of *priming* to a great extent, but no shop can dispense with lead, ground in oil, for other purposes.

In the mixture of rough stuff or filling, white lead gives elasticity and life to the ochre, and when properly used, forms the tenacious part of the under coatings. But oil white lead should not be used where there is not sufficient time allowed for it to dry thoroughly.

After a good foundation has been secured, and smooth coatings of lead are desired, which will sandpaper smoothly and leave a pleasant surface to color over, the dry white lead should be used.

It may be mixed with or without oil, a small quantity of japan, and thinned with turpentine. In making putty it cannot well be dispensed with.

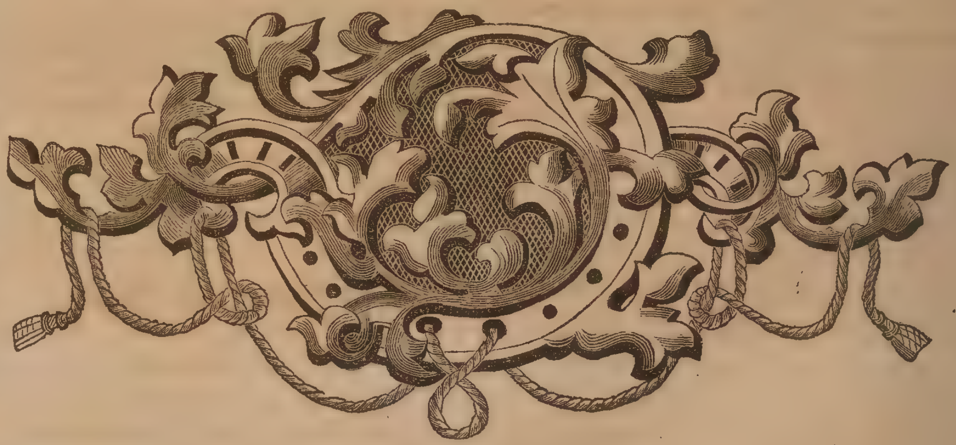
We prefer it to wet lead in the mixture of drabs, straw and other light colors, for the reason that the color works smoother, and is not so liable to skin over, or hang on the sides and edges of the cup.

Whiting is not used to any great extent among carriage painters, dry white lead answering every purpose. Whiting and white lead make good putty, and probably it would be far better if carriage painters would use it more than they do.

Yellow ochre is used by carriage painters almost exclusively for the mixture of rough coatings. It is a kind of clay, working and drying well, and cannot be dispensed with where a solid level surface is required.

Red lead is a good dryer, and might be employed to advantage in the mixture of rough coatings, thereby dispensing with the use of so much japan. If japan could be depended on as a safe article to mix paints with, it would be quite different; but as it is, now-a-days, the painter must bear all the blame of cracked and blistered work, when it is too often the fault of the japan. A japan, with gum shellac in it, will almost certainly ruin the reputation of the best painter in the country.

Red lead needs to be ground in oil where it is used for a foundation for vermilion.



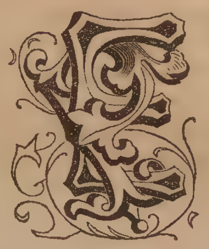
SCROLL PATTERN.

GROUND COLORS.

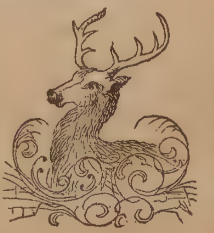
Chrome yellow is seldom used clear, except for fine line striping. There are different shades of it as well as qualities, the best being the cheapest, having more body. Lemon and orange are all that the carriage painter requires; with these he can mix up any hues needed by the addition of reds.

With white, yellow forms straw colors of different kinds; with red, orange tints; and with blue, green, lighter or darker, according to the proportions used.

In using yellow with blue or black, to form green, the painter should be careful to select a yellow which is free from red. An orange chrome will not produce, in combination with blue or black, a clear green; and, on the other hand, where a green tint is not wanted, no color should be used wherein there is a tendency toward yellow. Any color partaking of a yellow cast, when mixed with other dark colors, except reds and browns, tends to form greenish tints. If beginners will bear this in mind, it will save them a great many failures in the attempt to produce clear tones.



MONOGRAM P E OR E P.—In this pattern a plain letter is placed in connection with another letter, which is ornamented. By this means the pattern is not confused; the plain letter E gives full force to the ornamented letter P. Lay in gold or colors, as may suit the taste, and in working out the details, keep every part sharp and distinct.



BUCK'S HEAD.—Mix up two or three brown tints for the darker portions, the neck in front white, the horns of a dull grayish cast, touched up with a warm tint, as white and yellow ochre, shaded with black or dark brown. The dark browns may be deepened by glazing with asphaltum, which should be laid very thin.

Glazing cannot be put over wet colors; and as the painter seldom has time, in these days of transferring, to wait very long on his colors, the glazing can be omitted.

Do not mix a clear white for the neck; add a little ochre, giving a yellowish cast, or black, forming a gray, and touch up or high-light with but few strokes of clear white.

Apaumee.—In heraldry, a hand displayed open and extended, showing the palm. Lay in the ornament, with gold and colors, distributing them in such a manner as to prevent a confused effect.

Scroll Pattern.—Suitable for an opera board, sleigh, or vehicle where a large ornament is required. Where colors are used, mix up the different tints you decide upon, and blend in light and dark shades to form the leafing; afterward high-lighting with a few touches where the pattern needs to be brought out more distinctly.

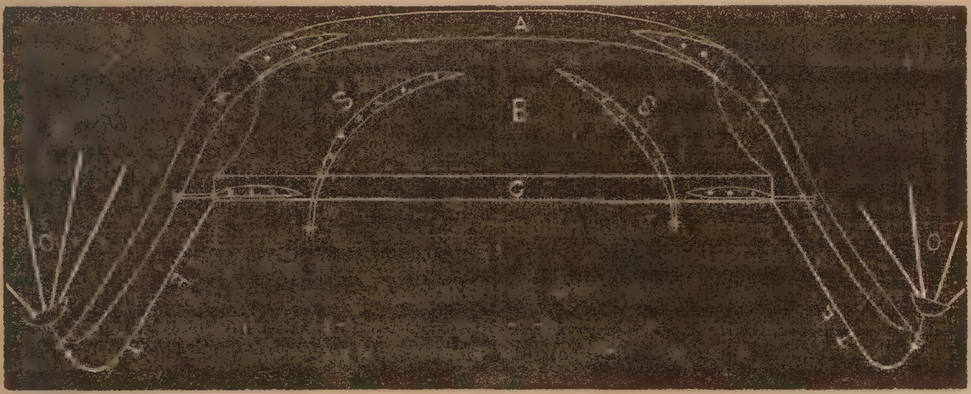
A scroll will have a more pleasing effect painted as above stated, than if the form of the leafing were worked out by a great many lines put on and crossed, dotted, and retouched.

Shears, Needle & Tack-Hammer.

T. ACKS, EDITOR.

THE "DEMAREST" BACK, WITH IRON ARM PIECES,

Is a very neat, plain and stylish looking affair, suitable for either roll-up or close-top buggy work.



Description.—The part marked A B C is wood, and extends from corner to corner of the seat. F F is like the ordinary rail, but screwed to the wood, as shown. X X are the band-iron arm pieces, continued around with the sweep of the seat, and eyed on to the rail at the "slat-iron prop." The back (joint) prop is forged to the rail, F F. The irons, S S, are screwed to the wood, and continued down the ends as bolts to fasten to the seat. O O are the slat irons.

HOW TO TRIM THE BACK, ETC.

The centre, B, is trimmed smooth, (plain,) without wrinkles or squares, *a la Grecian-bend back.* The space marks A and C are smooth rolls, and the lines at each side of A and C to be patent leather welts.

The style of buggy backs at present, in one of the first-class shops of New York City, are anything but neat; to my idea they are "*country.*" They are made in squares, (and poorly made;) stuffed very thinly, and the squares not at all "*formed.*" In fact, there is not more than half enough hair in them. The top edge is finished with a common looking smooth roll, brought to a sharp point at either end *on top;* in short, the whole affair is not up to the mark, either in style or workmanship. It has the appearance of having been *rushed.*

THE TRIMMING OF THEIR HEAVY WORK

Shows very little, if any, change. It is almost the same now as it was four years ago. There appears to be a stereotyped style or system of doing the work; and they have run so long in a given track that there appears to be no hope for a change. Certainly the heavy work is very well done, especially so in the leather department. That is first class. The dickey seat cushions are made in French style, namely, a box or frame made to fit the seat—no top or bottom in it—then covered. A front facing, as in the old style of cushion, nailed on the cover; the bottom with enameled cloth; nail lace on the top and bottom edges; fill in with hair; cover the top with muslin and blind sew in the top tight and smooth; no fullness, and the job is done.

THE DRIVING CUSHION

Is made the same way, except that a roll (of leather,) four inches wide, is made on each side of the top, none on the back or front part. The centre to be made of plush, with the grain running from front to back.

TO THE TRIMMERS WHO READ "OUR" JOURNAL.

Brothers:—Another year will soon have rolled around since we became acquainted through the columns of the Journal. Has it been of any benefit to us, in drawing closer the bond of fellowship, which should bind all of a trade? I think the year *has* done us good in that way. Has the dissemination and interchange of ideas through its columns done any good? Has it helped the new beginner to master some of the difficult parts of what will be his future means of earning an independent living? Or, has it succeeded, even, in sharpening the ideas of the veterans—the oldsters? Has it not waked their pride to do even much better than what they saw in the Journal? I am certain it has done this.

Brothers:—You are all well aware how very difficult it is to furnish *new material* for an article on our business every month; to offer something that will stand the sharp criticism of our trade; to find something that will be looked on as worth doing; to hunt up novelty every month *is no easy matter.*

We have done our best. We have spared no pains to see and find out anything that may be likely to interest you. Some things which have appeared in this department may not meet your approval, but, remember, this book is circulated over the vast expanse of this great country, and, to drag in an old, much worn proverb, "What is one man's meat is another man's poison," and that which you may think trivial is important to some other person.

To the great number of trimmers who may have, from time to time, assisted us by sending along their ideas, we offer our sincere thanks, and trust that, in the future, they will continue their efforts to improve our branch as they have done in the past. Let the old "*hug-an-idea-to-yourself*" plan no more show itself. Let us, in these columns, give to the world, for the benefit of our brother workmen, that which will be returned a hundred-fold in interchange of ideas, and let "*no pent-up Utica contract our powers,*" but give freely of your knowledge, receive in return, and use your influence and energy to push "*our*" book wherever a trimmer is to be found; and trusting that the readers of our department may be largely increased for the coming volume,

I am, brothers, yours, truly,

T. Acks.

Youth's Department.

For the Coach-Makers' International Journal.

A VIEW OF GREYTOWN.

BY DABBS, JR.

Away to the south of the United States, in the Republic of Central America, State of Nicaragua, is a very small city, known in Spanish lingo as San Juan del Nicaragua, but which, in *our* language, is called Greytown.

This city is situated at the mouth of the San Juan River, about two miles from the Atlantic Ocean; no ships, or vessels of any considerable size can approach the City, but must lay outside the *bar*, some three or four miles, while the passengers, freight, &c., are conveyed to and from the city on *life boats.* These boats are always manned by *Caribs*, who are like fish in the sea, and they are kept for this purpose.

The inhabitants of Greytown are composed of Indians, Spaniards, Creoles, Negroes, and a mixture of the whole. Their dress is very *light*, but not very agreeable to the whites, who may be detained there. Children under *six* years of age go nude, from that age to *twelve*, a broad rimmed *straw hat* is sufficient, while all those above that age wear a pair of *pantaloons* or a *shirt*. The *ladies'* (?) dress, from twelve years old and upward, consists of a *tilting hoop*, to which is sometimes added a *petticoat*.

When the steamer arrives in G—, every house is a *hotel;* (?) in fact, this is their only source of revenue. Some of these hotels are very *cool;* they are built of *bamboo*, (or reeds,) stuck in the ground about an inch apart, coming up to a peak like some of our gable roofs, the whole thatched with *plantain leaves*. A place is left as a door, or rather a *door way*, no windows are needed, as the light between the *chinks* is sufficient.

One of these huts, size 8 by 10 feet square, glories in the name of ASTOR HOUSE. The name is painted on a piece of drift wood, in various shaped letters, with whitewash. There are *some* very neat hotels in G— though, of which the Transit House takes the lead, closely followed by the Russ, Nicaragua, Portage, U. S., American and Continental Houses, and the Hotel de Francaise. Several consuls of different nations reside here, and have neatly painted frame houses, though *none have glass windows*, there being none in town.

There is one large *general* store, an innumerable number of rum shops, three barber shops, a church, a court house and the Governor's residence.

The principal of these buildings are built around an open square, called the "Plaza." "Fandangos," are the rage in the evening, and there all the blue blood aristocracy and the plebeian enjoy themselves alike.

The women here at the parties wear dresses, and the men appear in full suit; some of them even condescending to put on that superfluous article—a pair of shoes. Every day is wash day here, *they* do not wait for Monday. They have no tubs, wash boards, indigo or soda, but each family is the happy owner of a large flat stone, which is kept in the "Lagoon," and there the women take the clothes and batter them around the stone, as though trying to tear them into shreds, until they are clean.

Their largest canoes, which are called "Bungos," ply up and down the river, between Greytown and more central towns, carrying up groceries, &c., and bringing down bananas, pine apples, oranges and cocoanuts, while now and then one arrives with a couple of monkeys and about a dozen parrots. A *wagon* is a thing unknown in Greytown; the only *thing* on wheels being a rather large push cart.

The *hunters* of Greytown carry a large broad sword at their side, which they use to cut their way through the (otherwise) impenetrable forest, which stretches all over Central America. The novelty of being in this semi-barbarous country will last for a week or two; but, after that, you think of your distant home, 2,000 miles away.

[TO BE CONTINUED.]

Remedies and Receipts.

CURRANT ICE CREAM.—Put one large spoonful and a half of currant jelly into a basin with a half a gill of syrup, squeeze in one lemon and a half, add a pint of cream and a little cochineal, then pass it through a sieve, and finish in the general way.

CHERRY CIDER.—Thirty gallons of apple cider, eight quarts of dried blackberries, two quarts of dried blueberries, one quart of elderberries, seventy-five pounds of brown sugar. If you design to make smaller quantities, proportion the quantities of the ingredients accordingly. We never make less than a barrel or two at once.

TO CURE A FELON.—Take common rock salt, such as is used for salting down pork and beef, dry it in the oven; then pound it fine, and mix it with spirits of turpentine in equal parts. Put it on a rag, and wrap it round the thumb, and as it gets dry put on some more, and in twenty-four hours we are assured the felon will be dead.

CURE FOR A FOOT WOUNDED BY A RUSTY NAIL.—Just as soon as possible after the foot is hurt, put some hot ashes in half a pail of water, and immerse the foot in the water while as hot as can be comfortable, and keep it in half an hour. This remedy will draw out soreness and inflammation.

HOT MILK A REMEDY FOR DIARRHŒA.—Hot milk has been very successfully tried in Bengal as a remedy for diarrhœa. A letter from a resident says, that a pint every four hours will check the most violent diarrhœa, stomach-ache, incipient cholera, or dysentery. It is perfectly soothing to the whole alimentary canal. Half a pint every meal generally reduces, gradually and pleasantly, any ordinary diarrhœa.

BREAKFAST MUFFINS.—At night, take one pint of new milk, one egg, three tablespoonfuls of yeast, one large spoonful of butter, and flour enough to make a stiff batter. Beat them together thoroughly. In the morning dip this light sponge out very carefully into iron or muffin rings, and bake in a quick oven. If iron moulds are used, they should be hot when the batter is put in.

NEW METHOD OF MAKING JELLY.—Press the juice from the fruit, add the proper proportion of sugar, and stir the juice and sugar until the sugar is completely melted; put it into jars, and in twenty-four hours it will become of a proper consistency. By this means the trouble of boiling is avoided, and the jelly retains more completely the flavor of the fruit. Care should be taken to stir the mixture until the sugar is completely melted, and fine sugar used.

TOMATO CATSUP.—Take ripe tomatoes, and scald them just sufficient to allow you to take off the skin; then let them stand for a day, covered with salt; strain them thoroughly to remove the seeds; then to every two quarts add three ounces of cloves, two of black pepper, two nutmegs, and a very little cayenne pepper, with a little salt. Boil the liquor for half an hour, and then let it cool and settle; add a pint of the best cider vinegar, after which bottle it, corking and sealing it tightly. Keep it always in a cool place.

STAINS IN MUSLIN.—The following receipt is for taking out the stain of fruit, red wine, ink or mildew from white articles: An ounce of sal ammoniac (or hartshorn) and an ounce of salt of tartar, well mixed; put them into a pint of soft water, and bottle it for use, keeping it very tightly corked. Pour a little of this liquid into a saucer, and wash in it those parts of a white article that have been stained. When the stains have been removed by this process, wash the article in the usual manner.

FRUIT which will retain its form on being cooked, such as quinces, pears, apples, whortleberries, &c., may be put up and preserved after the following method: Provide yourself, in the first place, with stone jars holding one, two or three gallons as you choose. Select jars having small openings at the top, and close-fitting covers for the same. Prepare your fruit nicely, and cook it in a porcelain kettle; sweeten it to the taste, and when well done, pour it, while at boiling heat, into the jars, the latter having been previously heated. Place the covers upon the jars; then make a paste of plaster of Paris and water, and immediately spread a thick coat of the same over the covers, completely filling the mouth of the jar. This preparation hardens in a very few minutes, and renders the jar air-tight.

ICE ITEM.—The curative and relieving powers of ice are found more valuable year after year. Small lumps of ice, swallowed whole, will often check acute stomach inflammations, and will prevent nausea, if heat is applied outside at the same time. Pounded ice, applied to the spine, is said to cure sea sickness. A bit of ice will help diphtheria and all throat complaints. To become delightfully cool in summer, apply ice, wrapped in paper, to the back of the head for one moment.

GRAPE JELLY.—Strip from their stalks some fine ripe black cluster grapes, and stir them with a wooden spoon over a gentle fire until all have burst, and the juice flows freely from them. Strain it off without pressure, and pass it through a jelly bag, or through a twice folded muslin. Weigh them, and boil it rapidly for twenty minutes; draw it from the fire; stir in it, till dissolved, fourteen ounces of good sugar, roughly powdered, to each pound of juice, and boil the jelly quickly for fifteen minutes longer, keeping it constantly stirred and perfectly well skimmed. It will be very clear, and of a beautiful pale rose color.

Scraps of Humor.

IF YOU want your neighbors to "know all about you," give a party and don't invite the folks "who live next door."

A CORRESPONDENT (unmarried,) suggests that Solomon's wisdom was due to the fact that he had seven hundred wives, whom he consulted on all occasions.

MRS. A. K BAILEY, editress of the Decorah (Iowa) Republican, apologises for the detention of her paper, "because of the late arrival of an extra male."

AN illiterate farmer in Indiana, whose house was surrounded by water and nearly afloat in the recent freshet, put up a sign on the front door "For Sail."

"MAMMY," said a precocious little boy, who, against his will, was made to rock the cradle of his baby brother, "If the Lord has any more babies to give away, don't you take 'em."

A FOOLISH fellow advised a friend not to marry a poor girl, as he would find matrimony with poverty "up hill work." "Goose," said his friend, "I would rather go up hill than down, any time."

A PRUDENT man advised his drunken servant to put his money away for a rainy day. In a few weeks the master inquired how much of his wages he had saved, "Faith, none at all, sir, it rained yesterday, and all went."

A GENTLEMAN one day indiscreetly asked a friend how old she was. She reflected. "Let me see, I was 18 when I was married, and my husband was 30, now he is twice 30, which is 60, so, of course, I am twice 18, that is 36."

A VERY small pattern of a man lately solicited the hand of a fine buxom girl. "Oh, no," said the lady. "I can't think of it for a moment; the fact is, Tommy, you are a little too big to be put in a cradle, and a little too small to put in a bed."

AN irregular apprentice, frequently keeping late hours, his master at length took occasion to apply some *weighty* arguments to convince him of the "error of his ways." During the chastisement the master exclaimed: "How long will you serve the devil?" The boy replied, whimpering: "You know best sir; I believe my indentures will be out in *three months*."

AN Irishman on his way to Manchester, N. H , arrived at the forks of a road where stood a sign-board which read thus: "Manchester, four miles." "Man chased her four miles! Be the houly poker, I could have caught her meself in half the time."

"TA TOES!" cried a colored peddler in Richmond. "Hush dat racket! You distracts de whole neighborhood;" came from another colored individual in a doorway. "You kin hear me, kin you?" "Hear you! I kin hear you a mile." "Tank God for dat! I'se hollerin to be heard--*ta toes*."

A PREACHER whose custom it was to preach very long sermons, exchanged with one who only preached half as long. At about the customary time for dismissing, the audience began to go out. This hegira continued till all had left but the sexton, who stood it as long as he could, and then walking up to the pulpit stairs said to the preacher, in a whisper:—"When you have got through, please lock up, will you, and leave the key at my house, next to the church?"

A GOOD ONE.—Says the *Wisconsin River Pilot:* A young blood residing not a half dozen miles from this place, was the victim of rather a good joke on Sunday night, recently. He was trying to be particularly sweet on a young lady, and had paid her a number of visits at the residence of her parents. The old folks had somehow got an idea into their heads that the children were most too young to "keep company," and conveyed the desired hint by calling the girl out of the room and sending her to bed at nine o'clock; the lady of the house then astonished the young gent by bringing into the parlor a huge piece of bread and butter, nicely spread with sugar, which she presented to him, saying in her kindest manner. "There, Bubby, take this and run home to your mother; it's time little boys were in bed." The would-be gay young beau hasn't felt as though he wanted any more sweetness from that source since.

PUBLIC ENTERTAINMENT.—A Teutonic judge having a culprit before him accused of murder, but proved only guilty of skeep stealing, laid down the law and evidence and nature of the verdict in the following comprehensive charge:

"Hans has been dried for murder before you, and you must pring in der verdick, but must be 'cordin' to der law. Der man he killt vasn't killt at all, as it was broved he was in ter jail for sheep stealin'.

"Put dat ish no matter, Der law says ven der is a tout, you gives 'em to der brisoner, but here dere ish no tout—as you see der brisoner is guilty. Pesides, he ish a great loafar. I have knowed him fifdy year, and hasn't tone a sditch of vork in all that times, and der ish no debending upon him for dere livin, and he is no use to nopody. I dink it would pe goot blans to hang him for de example. I dink, Mr. Voremans, dat he petter pe hung next Fourt' of July, ash der militia ish goin to drain in anoder gounty, and der pe no fun going on here."

A LITTLE DARKEY was recently found sitting on the steps of a fashionable house not far from Saratoga, crying pitifully. "What's de matter wid ye?" asked a colored women. "Dars matter 'nuff--trouble all over de house. Fadder am drunk; mother am gone home wid close; sis done broke de looking glass wid the broom stick; de baby got her eyes full of kyan pepper; and little Ned Antony put de mustard on his hair for goose-grease. I put salt in my tea for white sugar, and it makes me sick. The dog licked Ned's face, and got his mouth full of mustard, and lays under de bed howlin'. De kitten got her head in de milk pot, and I cut her head off to safe de pitcher to get de head out, and de way I'll get licked wen mudder comes home, for setting de bed afire, is a sin."

Miscellaneous.

TEA first brought from China to Europe in 1501.

GERMAN sewing machines are run by clock work, which runs for three hours after winding up.

LAST year's raisin crop, at Malaga, was the greatest ever raised, amounting to very near two million boxes.

IN some parts of Texas corn is so abundant that farmers cannot get rid of it at twenty-five cents a bushel.

MEN who are all cheek are rarely men of brain. Nature can't support too much in one establishment.

A CHICAGO girl is making her fortune as a house-painter. She is not the first girl that has been in the painting business.

THE first thing is to be good, then great, if you can. But goodness would be greatness if the world looked straight and felt right, as it ought.

DON'T imitate the sun and rise early, unless you intend to retire when he does. The sun don't go around to theatres, balls, meetings, and all that in the evening.

A YOUNG MAN named Powell, while mocking a deaf and dumb person on the cars, between Bellville and Galloway's, Tenn., a few days ago, was suddenly struck totally deaf and dumb.

THE Rev. William Morley Punshon visited both Chicago and Cincinnati, and he says that "at Chicago everybody seems to be going to some place; at Cincinnati, they look as though they had been there and returned."

"THERE is a wide difference between wit and humor. Humor lies sparkling at the bottom of a deep well, while wit, clad in garish habiliments, with a bright feather in his hat, sits astride the highest weathercock."

THE first of the Erie Railway cabs appeared in the streets of New York City, on the 12th of August, and attracted much attention. They are of a light drab color, and present an attractive appearance. They are calculated to accommodate four persons each.

A PIECE of mechanism for transferring railroad cars from one track to another without necessitating the running of the cars several hundred feet back or forward, and without the use of switches, has just been patented. Its practical advantages are a saving of depot room and time.

AN oriental maxim runs thus: If a man knows, and knows that he knows, he will lead a happy life. If a man does not know, and knows that he does not know, he may lead a tolerable life. But if a man does not know, and does not know that he does not know, he will lead a miserable life.

THE working model of a steamboat, with a new style of propellers, has been exhibited at Bridgeport. The wheels are made like augers, cause no jar to the vessel, nor commotion on the water, and are said to secure greater speed. They can be attached either at the stern or side of vessels. A patent has been obtained, and experiments are making to test the merits of the nvention.

A LETTER from Weimar says they have two very pretty customs there connected with the erection of houses. One is that a young child always drives the first nail into one of the timbers, and an inscription is made upon the wood, bearing the name and age of the child, date of erection, &c. Then when the house is raised, a few planks are laid for flooring an upper story, when the master builder, his workmen and all well-disposed friends assemble to sing a song of praise to God for the safe accomplishment, thus far, of their undertaking. Then a band of music plays, numerous bottles of wine are drank, and there are speeches, toasts and huzzas from stentorian German throats.

HOW OROIDE IS MADE.—"Oriode," the beautiful alloy resembling gold, is a French discovery, and consists of pure copper, 100 parts; zinc or (preferably) tin, 17 parts; magnesia, 6 parts; sal-ammoniac, ½ part; quick-lime, ⅛ part; tartar of commerce, 9 parts. The copper is first melted, then the magnesia, sal-ammoniac, lime and tartar in powder are added little by little, briskly stirring for about half an hour, so as to mix thoroughly; after which zinc is thrown on the surface in small grains, stirring it until entirely fused. The crucible is then covered, and the fusion maintained about thirty-five minutes, when the dross is skimmed off and the alloy is ready for use. It can be cast, rolled, drawn, stamped, chased, beaten into a powder or leaves; and none but excellent judges can distinguish it from gold.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

WANTED—To know the whereabouts of Anthony Selle, by trade a carriage trimmer. Last heard from at Adrain, Mich., July 23d, 1868. Any person knowing of his whereabouts will confer a great favor by addressing C. SELLE, Dubuque, Iowa, or F. SELLE, Detroit, Mich.

WANTED—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

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Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, August 20, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
“ snaps, silvered, per gross, $5.25.
Axle-clips, Philadelphia List price, per doz.: No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 40 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.
Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
“ Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50
Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
“ Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
“ Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.
Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
“ Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.
Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.
Basket-wood imitation, for panels, per foot 60c.
Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.
Bolts, Phila., 40 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.
Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.
Buckram, per yard, 16 to 20c.
Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.
Castings, mall, per lb., 13c.
Cord, seaming, per lb., 25c.
Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
“ body, per yard, indigo wool-dyed, $3.75 to $4.50.
Coteline, per yard, $4 to $8.
Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.
Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30; English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.
Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.
Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.
Drugget, felt, per yard, $1.35 to $2.
Enameled cloth, per yard, muslin, 5-4, 33c.; 6-4, 40c.; drilling, 5-4, 46c.; 48 inch, 48c.; 6-4; 62c.; duck, 5-4, 63c.; 50 inch, 68c.; 6-4, 75c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 60c.; 48 inch, 62c.; flock drill, 48 inch, 95c.; do., muslin, 85c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.
Felloe plates, wrought, per lb., 15c.
Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.58; New York pat., ⅝, $1.12; ¾, $1.20.
Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.
Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.
Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.
Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
■ Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.
Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.
Lamps, per pair, fine, $15 to $20.
Leather, per foot, dash, No. 1, 14c.: do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 26c. to 28c.; do., No. 2, 24c.; enam. trimming, 24c.
Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.
Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.
Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
“ spoke ten. machine, each, sm., $15; large, $25.
“ bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.
Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30: No. 3, cuts ½ to 1 inch, $40.
Moss, per lb., 10c. to 15c.
Name plates, per do., en., German silver, $4 to $4.50.
Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.
“ improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
“ Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
“ Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
“ Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $2.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.
Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2.15; 1⅛, $2.50; 1¼, 2.65.
“ close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
“ close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
“ ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
“ neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
“ Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.
Slat irons, wrought, N. Y. pat., per doz. sets, 4bows, $12
“ Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
“ plated, short, $1.20; 1 long iron, $1.37.
“ japanned, short, 55c.; 1 long iron, 62.
Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.
“ Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 23c.; 1½, 3, 4 and 5 plates, not shorter than 33 inch, 22c.; shorter than 33 inch, per lb. extra, 3c.
“ Bright oil-tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.
“ Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.
Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.
Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.
Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.
Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.
Top holders, Thomas patent, buggy, $5 each; extension, $7 each.
Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.25; Thomas' wrought with plated nuts and rivets, $1.35.
Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
“ Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
“ dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
“ machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.
Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.
Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.
Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,
Tufts, per gross, common worsted, 18c.
Twine, tufting, per lb., No. 16, 50c.; best mattress, 85c.
Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.
Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.
Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.
Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.
Whip socket fasteners, $3.00 per dozen pairs.
Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.
Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
“ ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.
“ white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
“ sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
“ hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.
Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 in. diameter, $2 to $2.25 per set,
Poles, hickory, per dozen, rough, $12: finished, $16.
Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
“ sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.
Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30: grocery, $20.
Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
“ “ .double “ $4.50 “
Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.
Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.
Seat arms, per dozen pairs, $1.25.
Spokes, buggy, hick. per set, 1½ in. and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.
Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.
Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.40; deep, $1.30; Ger. gotn. pale, $1.40; deep, $1.30; Chinese, $1.30; Trieste, $1.25; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 15c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 15c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000, 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, for one year, commencing No. 1, Volume V., for one dollar each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

*HARPER, HENRY, (Harper's Patent,) Butler, Ill.
JAMES JUDD, Agent, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

MOSSER & CAMP, Allentown, Pa.
*SAUNDERS, M., Hastings, on the Hudson, N. Y.
ATWATER, H., Agent, 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winstead, Conn.

Carriage Body Manufacturers.

* HOLDSWORTH, WM., Chester, Pa.
NORCROSS, H. S., 1712 Coates street, Phila., Pa.
STEPHEN PERKINS, Rahway, N. J.

Carriage Bolt Manufacturers.

HAYDEN, A. & M. 22d, above Vine street, Phila., Pa.
***SCOTT & DAY,** 38 North Third st., Phila., Pa.
***SHIELDS, WM.,** Girard Bolt Works, 23d above Race st., Philada., Pa.
SIMPSON & JACKSON, 22d and Filbert streets, Phila., Pa.
***SKELLEY, T.,** Philadelphia Carriage Bolt Works, 24th, below Callowhill st., Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.
HUBLEY, ADAMS & CO., 5 Market st., Pittsburg, Pa.

Carriage Castings.

***FITZGERALD & FLAGG,** 218 North Third street Phila., Pa.

Carriage Draftsmen.

*MULLER, A., 142 Second street, New York City.

Carriage Mounting Manufacturers.

*BURWELL, WM., 236 Arch street, Phila., Pa.

Carriage Wheels.

*BROWN, S. N. & CO., Dayton, O.
LOUCKS, WM., 825 N. Thirteenth st., Philadelphia.

Coach Hardware and Trimmings.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
McNALLY & McMULLEN, 39 S. Charles st., do do
*PORTER, R. B. & SON, 78 West Pratt st., do do
SHARE, GEO. K. & CO., Indianapolis, Ind.
ATWATER, H., 1625 Market st., Phila.
*BURWELL, WM.. 236 Arch st., Phila., Pa.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
FORT, GEO. E., 147 North Third st., do
KEIM, GEO. DEB., 162 N. Third st., do
***ROUSE, J. G. & CO.,** 4th & Arch sts., Phila.
***SCOTT & DAY,** 38 North Third st. do
SNYDER, W. & A. J., 115 North Third st., do
STOTESBURY & KENNEDY, 56 Norta Third st., Phila., Pa.
MOORE & CATTELL, Salem, N. J.
SMITH, E. B. & CO., 77 Warren st., Trenton, N. J.
KIRK, HAMMOND & CO., West Chester, Pa.

Carriage Wood-work.

*BROWN, S. N. & CO., Dayton, O.
OLMSTEAD & JONES, Syracuse, N. Y.

Coachmakers' Tools.

UNDERHILL BROS., 71 Haverhill st., Boston, Mass.
WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.
BROWN, PHILIP, Rahway, N. J.

Coach Lamps.

*CAREY & POST, 234 Carter st., Phila., Pa.
***NIXON & WIGLEY,** 39 North 7th St., Philada.

Felloe and Spoke Manufacturers.

***HOOPES, BRO. & DARLINGTON,** W. Chester, Pa.

Glue and Curled Hair.

SPRAGUE, F., Dayton, O.
BIDWELL, DANIEL, 254 Pearl st., New York City.
LEONARD, AMASA, 59th st., N. River, N. York City.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
McNALLY & McMULLEN, 39 S. Charles st., do do
*PORTER, R. B. & SON, 78 W. Pratt st., do do
*BROWN, S. N. & CO., Dayton, O.
SHARE, GEO. K. & CO., Indianapolis, Ind.
***SCOTT & DAY,** 38 North Third st., Phila., Pa.

Iron Merchants.

WEYER, J. S., Madison, Ind.
HOPKINS, H. & J., 138 Reade st., New York City.
ATWATER, H., 1625 Market st., Phila.
POTTS, H. T., 215 North Second st., Phila. Pa.

Ivory and Horn Turners.

HACKERT, JULIUS, 171 Suffolk st,, New York City.
ATWATER, H., Agent, 1625 Market st., Philo.

Paint and Varnish Brushes.

***FELTON, RAU & SIBLEY,** 136 North Fourth st., Phila., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.
***THUM, CHAS. D.,** 150 N. 3d st., do

Permanent Wood Filling.

VALENTINE & CO., (Piotrowsky's Patent,) 32 Kilby st., Boston, Mass.

Rubber Enameled Carriage Cloth.

***ODORLESS RUBBER CO.,** 19 Park Place, New York City.

Silver Platers.

*BURWELL, WM., 236 Arch st., Phila., Pa.

Paints, Oils and Varnish.

TRUMAN, DUNHAM & CO., 118 Superior st., Cleveland.
BIDWELL, DANIEL, 254 Pearl st., New York City.
***FELTON, RAU & SIBLEY,** 136 North Fourth st. Phila., Pa.
LUCAS, JOHN & CO., 141 N. 4th st. Phila., Pa.
McKNIGHT & CO., 22d and Race streets, Phila., Pa.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., do

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

CROWELL, DAVID, Rahway, N. J.
NEWELL BROTHERS, Owego, New York.
***HOOPES, BRO. & DARLINGTON,** W. Chester, Pa.

Spring Manufacturers.

*SPRING PERCH CO., John st., Bridgeport, Conn.
KILLINGWORTH MANUF'G CO., Clinton, Conn.
ATWATER, H., Agent, 1625 Market st., Phila.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.
RAHWAY SPRING AND BOLT WORKS, Rahway, N.J.

Tack and Lining Nail Manufacturers.

DUNBAR, HOBART & WHIDDIN, S. Abington, Mass.

Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

***ATKINSON, W. & CO.,** 270 Broadway, New York.
MOLLER, CHAS., (sole Agent for U. S.,) 35 Maiden lane, New York City.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

VALENTINE & CO., 32 Kilby st., Boston, Mass.
COLGATE & CO.. 401 Illinois st., Chicago, Ill.
FITZGERALD, J. D., 315 Mulberry st., Newark, N. J.
***MINETT & CO.,** 60 Pearl st., New York City; 7 South Tenth st., Phila., Pa.
PARKER & GILLESPIE, 228 Pearl st., New York City.
***SMITH, EDWARD & CO.,** 161 William st., N.Y.
***FELTON, RAU & SIBLEY,** 136 North Fourth st., Phila., Pa.
***SCHRACK, C. & CO.,** 152 N. 4th st., Phila., Pa.

White Lead and Color Works.

BOYLAN & TUERS, 81 Maiden lane, New York City:
TIEMANN, D. F. & CO. 240 Pearl st., New York City.
McKNIGHT & CO., 22d and Race sts., Phila., Pa.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa

AYRES, LIPPINCOTT & CO.,
WHOLESALE DEALERS IN
CARRIAGE MATERIALS AND SADDLERY HARDWARE,
No. 49 NORTH THIRD STREET,
PHILADELPHIA.

We invite the attention of Manufacturers and Dealers to our complete stock of goods in the Carriage line, which we propose to sell at the lowest market rates.

Our facilities in the purchase of goods, in large lines, often enables us to supply them below Dealers and Manufacturers **PUBLISHED** prices.

LINDEN

Iron and Steel Manufacturing Company.

WORKS AND OFFICE AT WALPOLE, MASS.,

Manufactures Fine Goods for Makers of Best Carriages.

LINDEN CARRIAGE SPRINGS,

Now Acknowledged to be the Most Durable and Reliable.

These Goods are made from best Swedes Steel, thoroughly tested, highly finished, and all warranted.

LINDEN PATENT AND HALF PATENT AXLES.

MAIL PATENT AXLES, No. 1, Brass Nuts; MAIL PATENT AXLES, No. 2, without Nuts; COACH AXLES, Russ Pattern.

HALF PATENT AXLES.

LINDEN EXTRA,

Made from Bessemer Steel, with malleable boxes, case hardened, highly finished, and perfectly fitted.

LINDEN, No. 1,

Made from best Iron, with solid collar, case hardened; malleable box also case hardened; solid nuts, which obviate capping

LINDEN, No. 2,

Made from best Iron, with solid collar, nicely fitted, well finished and warranted.

LINDEN SOLID-COLLAR COMMON AXLES,

Made from best Scrap Iron for fine Express Wagons, &c.

NORWAY IRON CARRIAGE BOLTS.

All our Carriage *and Tire* Bolts are made from the *very best* Norway Iron, *every* bolt warranted true to size, with perfect thread and *forged* nuts.

NORWAY IRON STUMP JOINTS.

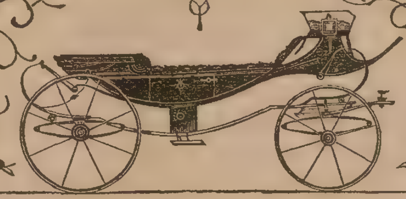
We have commenced the manufacture of a superior Stump Joint, true to size, true in shape, and with perfect joints.

We solicit orders from Manufacturers of fine Vehicles. We are determined to make the best Goods that can be produced, and at fair prices.

WM. S. TILTON,
SUPERINTENDENT.

H. W. TILTON,
PRESIDENT.

COACH-MAKERS'



INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 1. OCTOBER, 1869. $3.00 PER ANNUM Always in Advance.

OUR NEW DRESS.

No. 1, of Vol. 5, has the honor, if any may be attached to it, of soiling a font of type, entirely new, giving to our pages a fresher and more acceptable appearance. With new type and new headings for the Departments, we present the first number of the volume to our readers, feeling assured that they will appreciate every effort made to improve the appearance of the JOURNAL. Heretofore we have endeavored to bring out our paper in a style that would compare favorably with other periodicals of the day, and we think we have not been very wide of the mark. By the addition of new headings to the several Departments, which represent the trades by a part of the tools used by each, and the ornamental character of the headings, we think we have added to the beauty of our columns, and given a more decided form to the opening of each of the five divisions, which, combined, constitute the trade of coach-making.

Under the heading of "PENCIL, RULE AND SQUARE," the arduous labors of our draftsman will be set forth, giving instructions in that higher walk in this branch which none but the industrious, patient and persevering need attempt to follow him with profit. When the mind has conceived the form of any style of carriage, it naturally seeks to place that form on some substance which will give it a tangible shape. Tools of some kind must be used, and therefore we find that the first effort to satisfy the mind is by the use of chalk or the pencil. With the *pencil* the idea which stole into the mind is sketched out in a rough manner, and the practiced eye soon decides on the merits of the lines, and with the "*Rule and Square*" fixes the proportions and fitness of the several parts.

WHEEL-HORSE AND MALLET.—These tools or appliances, which are suggestive of wheel-making, cannot, we think, claim as high a position, *simply as tools*, as the pencil, rule and square; yet they are equally important in their places, and belong to that division of our trade which cannot often be dispensed with.

Without good wheels, no vehicle is of much value; and without wheels of any kind, what a sorry time we poor mortals would have in getting about from place to place. The wheel-horse holds the hub in a position to receive the spokes, and, with the springy mallet, sturdy blows send the spokes home securely in the hub.

HAMMER, SLEDGE AND ANVIL—Represent the trade of blacksmithing, and are, perhaps, more familiar to the majority of persons, than almost any other tools used by the mechanic, if we except the saw and plane. With the hammer, sledge and anvil the coachsmith does a large share of his work; welding, forming and fitting the different plates, stays, &c., which bind together and make safe for usage, the comparatively brittle wood.

This branch of coach-making is of the first importance, and a good smith may justly claim a position second to none in our line. The body-maker may produce a body with faultless lines, and the wheeler and gearing-maker may each contribute their skill in completing their work; but until the smith lights his fire, and with the hammer, sledge and anvil, he binds together with iron and steel the disconnected parts, there can be no great value attached to the wood work.

PUTTY KNIFE AND PAINT BRUSH.—Under this heading, there will be given, from month to month, such instruction as will be practically useful to the carriage painter. The putty knife, although it may be inferior in its uses to many other tools used by the painter, is nevertheless an indispensable one; for who would care to look at a fine carriage, where the nail-holes, and defects left by the wood-worker, had never been puttied up. The paint brush and putty knife, then, may be fitly used to represent this branch. A carriage might be run without any paint on it, and still be a carriage capable of adding to the comfort of its owner; but it would possess no beauty of colors, or lustre of varnish, to attract the eye, and satisfy that inborn taste which the Creator has implanted within us.

In this Department there is a wide field to work in, and we may safely add, a very hard one.

SHEARS, NEEDLE AND TACK HAMMER—Are the three most important tools which go to make up the trimmer's set. The *shears* may be used with profit, or with the greatest loss to the employer of any other tool in the establishment. When *they* are guided by a man of experience, of good judgment, and of sound principles, many dollars will be saved to the employer during the course of a year. When the stock is cut, the needle plays its part in uniting the pieces together; and with the hammer the whole is put into position for the comfort of the occupant.

Trimming, like painting, might be dispensed with, but the carriage would be rude and barbarous, and illy fitted to elevate the mind, for everything should be done decently and in order.

But while we have mentioned the new type and new headings, we have said nothing in regard to the *old type*, which has done such good service in the past. Let us not slight them, for, although now laid aside, they contributed much, while in use, toward the advancement of the carriage-maker in a knowledge of his trade; and we may truthfully say they were never set up for any base purpose, or arranged into words or sentences that were hurtful to the morals of our readers, or to the positive injury of any one.

Starting, then, with a new dress, we will conclude by saying, that we also start with new resolves to place the JOURNAL a degree higher this year than it was last, and to that end shall guard its columns from any and everything objectionable.

WORTHY OF IMITATION.

In the sketches we have seen of the life and public services of our late Secretary of War, General J. A. Rawlins, there is presented to the young men of our country an example well worthy of imitation. The son of a charcoal burner, he began his career as humbly and obscurely as could fall to the lot of an American boy.

Young Rawlins had to struggle against not only poverty, but with the demoralizing example of an ignorant, rude and intemperate father; and who does not know what a power for good or evil a father exerts, especially upon a son. Having pledged himself to total abstinence, he laid the foundation of a sound moral character, which, with his thirsting after knowledge, backed by an unswerving purpose, he wrenched, as it were, from the hand of fortune that which appeared to be not his own. In his efforts to obtain an education, and also to free himself from the dreadful effects of intemperance which environed him, we see plainly the force of character he possessed, and which, later in life, secured him a suitable reward. It is said of him that, "until he was twenty-two years old he was occupied chiefly in his father's trade of charcoal burning; but during that time he was enabled partially to satisfy his desire for knowledge by attending the district school several winters, and spending eight profitable months at the Rock River Seminary, at Mount Morris, Illinois. This is all the education, formally speaking, he ever had, but he carried to his studies an interest and industry which made his progress in them uncommonly rapid. In addition to his regular studies he read all the books he could obtain with eagerness, and in this way gradually acquired a practical and useful, if not an elegant education."

Successful as a lawyer, conscientious as a politician, faithful as a soldier in the defence of the life of his country, he was finally rewarded by being appointed (on the resignation of Gen. Schofield,) as Secretary of War, a position which he filled with marked ability, until he was prostrated by a disease contracted while in the army.

His last moments were made happy by the words of affection that were uttered in his hearing, and he quietly closed his eyes on the things of time, September 6th, deeply mourned by the nation.

The above brief sketch shows very plainly how important it is to begin early in life to establish a good character, also what those who have been reared in poverty may attain to, by a fixed determination to overcome every obstacle that may lie before them.

Had young Rawlins chosen for his associates those who were fond of the social glass, and spent his spare moments in idling away his time with the thoughtless and frivolous, or, it may be, worse characters, he never would have raised himself above that class of worthless young men so numerous in our cities. It is not expected of every individual that he or she will be called to fill the highest seats, nor is it necessary to their happiness that they should; still it is not wrong to covet the best gifts, or labor to excel in whatever honorable calling one may be engaged in.

The apprentice may, with propriety, desire to be advanced as he masters the tasks given him, and a faithful, willing boy should not be broken in spirit and energy by a useless holding of him back in learning his trade. It may be praiseworthy in a young man to retain his character unsullied in the midst of evil influences; but it is not, therefore, for the best interests of society that such influences should be fostered; for where we find one who has the decision of character possessed by young Rawlins, there are scores who fall an easy prey to temptation, and instead of being honored, in after-life, become a plague to society.

BUSINESS DIRECTORY.

We shall continue our Business Directory during the present volume. It was started for the few months of the last volume as an experiment, and with but very little effort we received a reasonable list. The advantages to the seller and user of goods have been many, and from letters received from subscribers it is considered an important addition to the Journal. Those who patronized us before, with but few exceptions, (as far as we have heard,) desire to continue. The price being only one dollar for the year, we should, without any extra effort, run the list up to at least a whole page. As an instance of the benefits, a mistake occurred in the number of W. Atkinson & Co.'s place of business, making it read 270 Broadway instead of 1270 Broadway, and many letters were lost thereby, some advertised, and it was several months before the error was detected, solving the mystery why so many of his letters were directed to 270 Broadway.

We hope those having coach-makers' goods to sell will not wait for a personal application, but send on their names at once, enclosing the amount.

PRETZSCHNER'S SALE.

We would remind our readers that a very important sale of new carriages, stock and fixtures of a large factory, will take place in Wilmington, Del., commencing Wednesday, September, 22d, 1869, and continue until all is sold.

Mr. Pretzschner being about retiring from active business, and having a large stock of finished and unfinished work on hand, which will all be sold, without reserve, makes it the most important sale to carriage makers and dealers for years past.

CHARTS.

In answer to many inquiries, we say we do *not* furnish a chart to subscribers *free.* We have a large oval centre office chart, 24 by 30 inches, containing 28 cuts, printed on fine lithograph paper, suitable for framing, which we mail free of postage for one dollar each.

The oval centre is left blank. Should any desire their name and address printed in centre, the cost will be $2 extra. The chart is sent on a roller to prevent breaking.

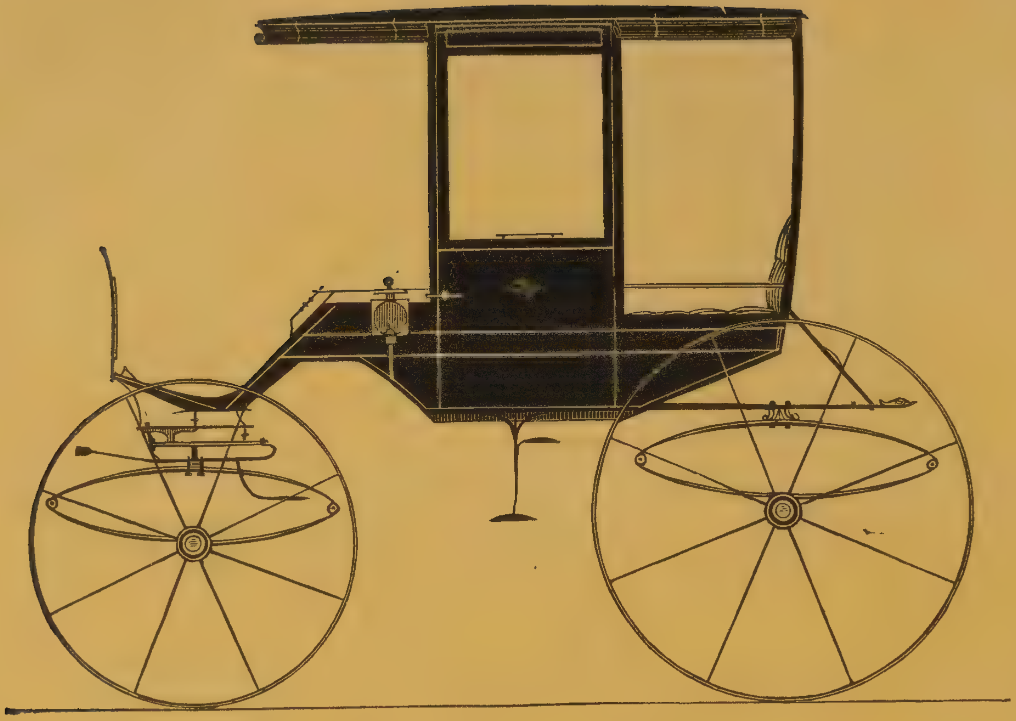
We are also getting up to order BUSINESS CHARTS, printed on PASTEBOARD, 18 by 22, containing 14 cuts. These, with name and address printed in centre, are furnished at the following rates: 12 copies, $8; 25 copies, $12; 50 copies, $18; 100 copies, $30.

Same card, printed on good paper, $15 for 100 copies; $25 for 200 copies; and $5 for each additional hundred.

No order received for less than 100 copies on paper.

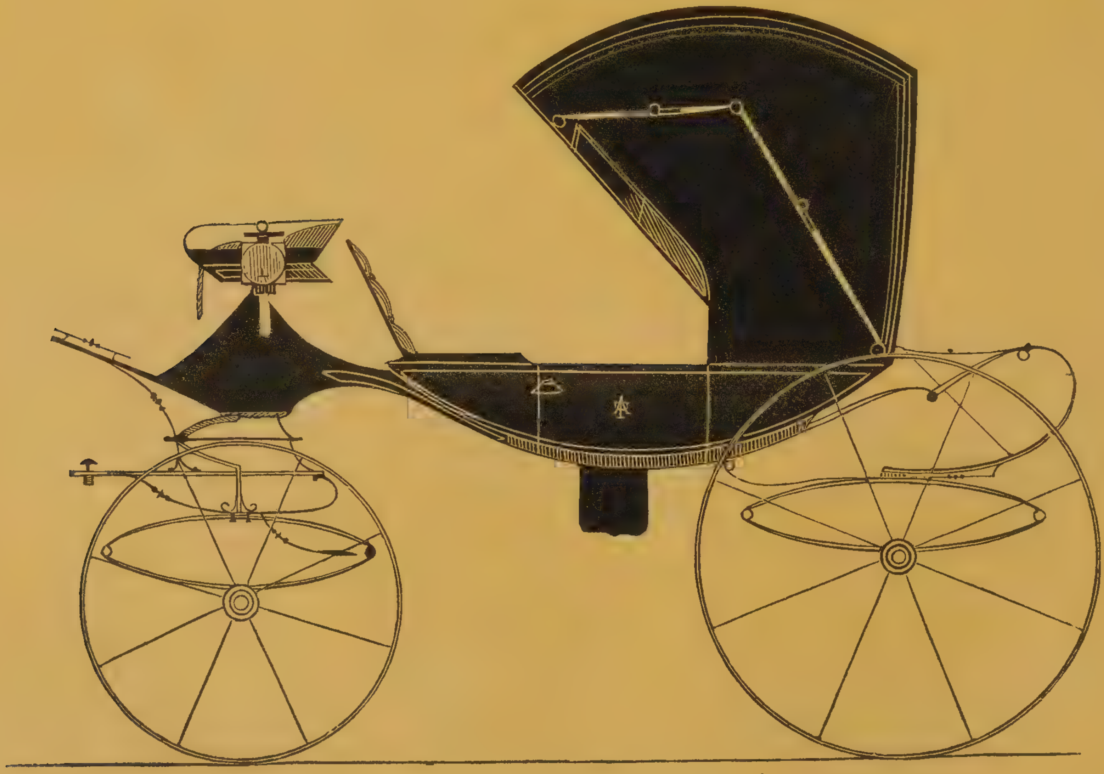
GLEANINGS.

We are pleased to hear that there are indications of a good fall trade among carriage makers. Some of the dealers report that they are filling large orders for carriage goods. We have had inquiries from the south of late, with reference to the supply of carriages, and the best market to buy in. * * No. 1, Vol. V. of the Journal, will be read by more carriage makers than any other publication devoted especially to the interests of the craft. * * Valentine & Co., of Boston, are determined to keep the Permanent Wood Filling before the people. From being used only as a priming coat for carriages, they have brought it to the notice of car builders, cabinet makers and house painters. Lastly, it is recommended as the best coating for floors. Why not call the attention of ship builders to it? * * The editor of "The Hub," unlike Rip Van Winkle, keeps *ahead of the times.* How about the contents of the September number, friend H.? * * The drought through Pennsylvania and New Jersey is being severely felt. The City of Philadelphia recently forbid the use of water for scrubbing the pavements, &c., on account of the low state of the Schuylkill river. * * Indianapolis, Ind., is a beautiful city, and among the many enterprising firms in different lines, that of Shaw, Lippencott & Conner, carriage manufacturers, rank among the first. A visit to their factory will convince any one of this. Their style of work is second to none in the land. * * A firm in Philadelphia will put a Finishing Varnish on the market this Fall, which has been pronounced by the best judges equal to the English varnishes in every respect. One quality will imitate Harland & Sons, and another quality that of Noble & Hoares. The price will be less than the English. * * The Central Park, at New



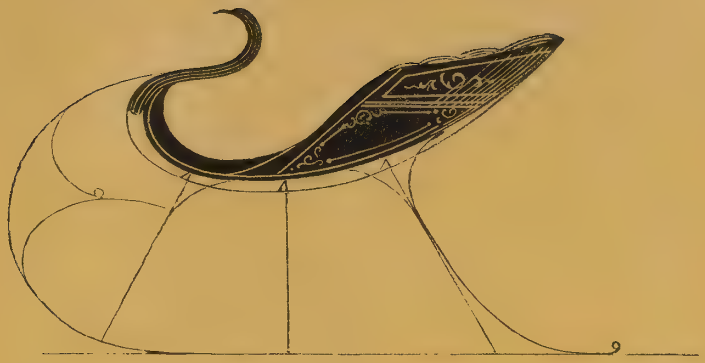
SASH-DOOR ROCKAWAY.

Plate No. 1.—Half-inch Scale.—Explanation on Page 3.



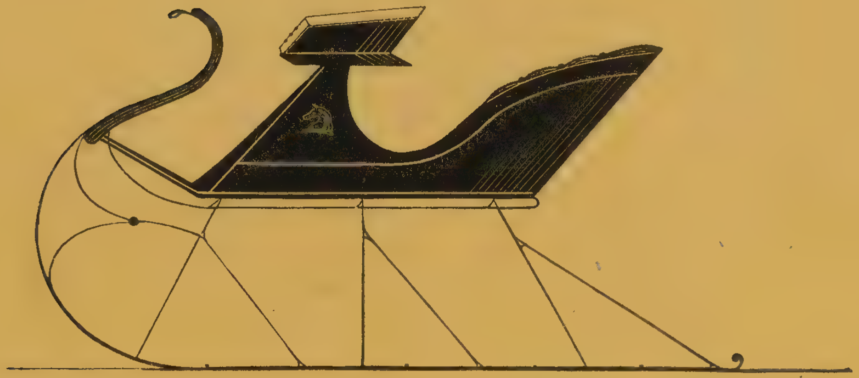
PRINCE ARTHUR BRETT.

Plate No. 2.—Half-inch Scale.—Explanation on Page 3.



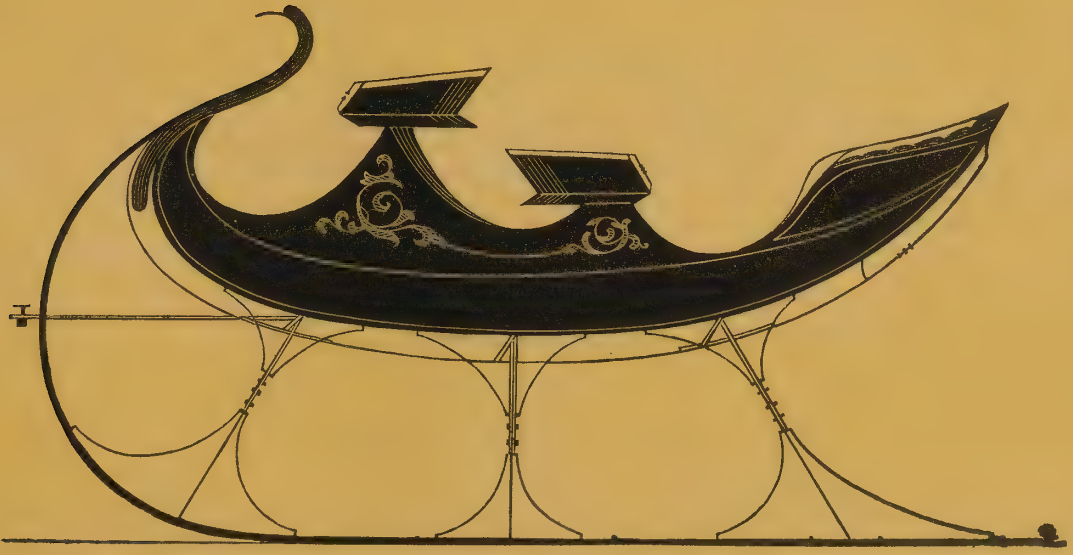
FAIRMOUNT PARK CUTTER.

Plate No. 3.—Half-inch Scale.—Explanation on Page 3.



HARVARD PONY SLEIGH.

Plate No. 4.—Half-inch Scale.—Explanation on Page 3.



ONTARIO SIX-PASSENGER SLEIGH.

Plate No. 5.—Half-inch Scale.—Explanation on Page 4.

York, has been of incalculable value to the carriage making interests of that city. A shabby turnout is shown off to such a bad advantage, (in comparison with the superb vehicles that go dashing by,) that the owner is compelled to dress it up, or order something new and stylish.

NEW ADVERTISEMENTS.

Howell Atwater, Phila., claims the attention of the public to Fleming's Patent Adjustable Seat Irons. These irons are different from any other kind of jump-seat brought to our notice, consisting of only one upright instead of two. The cut in advertisement shows two positions for the front seat; figure 1 being in upright position, as used for ordinary front seat; figure 2 respresents it thrown forward for child's seat, with back to the dash. This seat is certainly very convenient for any ordinary two-seated carriage. It has also been arranged for a jump-seat, and is claimed by the proprietor as being far superior to anything yet offered to the public, being entirely clear of any claims of former patents.

The *jump-seat* is being extensively used by carriage manufacturers, it being cheaper and much more convenient to the user. We have now the advertisements of three parties, and hope our readers will examine their different claims, and satisfy themselves which is best.

Who has not heard of Rahway, N. J., as a carriage manufacturing city, and of Jersey timber for wheels. Among the leading manufacturers of wheel stuff will be found David Crowell, Rahway Wood Works. It requires good timber to make good wheels, and its scarcity makes it quite difficult to obtain. See advertisement and send for price list.

R. Nickson, Akron, Ohio, renews his advertisement in different form. These self-acting spring joints are spoken of very highly by those using them, and are worthy the attention of the public.

Post, Herkner & Co. continue their adververtisement. We are assured the goods manufactured by the Odorless Rubber Co. merit the attention of all carriage-makers.

Wilson & Hayden, 22 Main street, Cincinnati, and Scott & Day, 38 North Third street, Philadelphia, dealers in coach hardware and trimmings—

Felton, Rau & Sibley, 136 North Fourth street, Philadelphia, varnish manufacturers and dealers in paints and oils—

W. Atkinson & Co., 1270 Broadway, N. Y., dealers in transfer ornaments—

C. Kunzig, 507 Vincent street, Philadelphia, patent concealed hinge—having felt the influence of the Journal, order their advertisements continued, and we trust each and all will receive a full share of public patronage. We never recommend anything as being good unless we are satisfied in our minds it is. We are liable to err in judgment, but endeavor to be honest in our representations.

The advertisers in the Journal, without exception, are men of honor and integrity to the best of our knowledge, and no money would induce us to advertise intentionally a bogus article. We are not supposed to be able to judge fully as to the utility of the many different patents that are being presented to the public, but when, in our judgment, an advertisement is calculated to deceive, we shall, as we have done before, reject them, however much may be the inducements offered.

Fashion Plates Explained.

SASH-DOOR ROCKAWAY.

Plate No. 1.—This design, which has decided points of originality, will no doubt be acceptable in every section of the country. The rockaway coming, as it does, between those styles which are denominated heavy, the builder is often at a loss to fix on a pattern which will not look too clumsy. We think this design is free from that objection; and as it may be built with or without sash doors, the price can be regulated accordingly.

Dimensions.—Width on seat: 3 feet 5 inches. Body with 2 inches turn-under. The front to be framed with the same bevel of turn-under as described in July number, which produces a narrow front. Hubs: 4⅜ by 7 inches. Front band: 3⅛; back band: 3⅝. Spokes: 1¼. Tire: 1 by ¼. Axles: 1⅛. Springs: 36 inches long, 1½ wide, 4 plates. Wheels: 3 feet 4 inches, and 4 feet. Track: 4 feet 10 inches.

Trimming.—Blue cloth, diamond back.

Painting.—Panels of body: plum color, (mixed of lake and drop black.) Belt: black. Carriage part: black. Striped with plum color, edged with gold or canary color. No striping on the spokes, except on the face.

PRINCE ARTHUR BRETT.

Plate No. 2.—A style which is always pleasing, and one which suits a variety of customers. This plate is similar to others previously given, and yet there may be detected very superior lines and sweeps. The boot is the latest pattern, and is brought up at top to 2 inches, which gives it a very light appearance. The seat is supported by a scroll stay, which is intentionally omitted.

Dimensions.—Width of bows: 48 inches. Body with 3 inches turn-under. Mouldings: ½ inch deep, chamfered. Width of boot: 30 inches. For concealed hinge to front lid, see description of Clarendon Brett in March number. Hubs: 4⅞ by 7½. Front band: 3½; back band: 4⅛. Spokes: 1⅜. Springs: (back,) 36 inches long, 5 plates, 1¾ wide; front springs: 34 inches long, 5 plates, 1¾ wide. C springs: the same number of plates, and same width. Wheels: 3 feet 6 inches, and 4 feet 2 inches. Tire: 1⅛ by 5-16. Axles: 1⅜. Track: 5 feet.

Trimming.—Brown cloth.

Painting.—Body: panels, royal purple, with ¼ in. gold line on mouldings, and fine line of white on side panels, half an inch from moulding. Carriage part: plum color, striped black, edged, or distance lined with gold or canary color. Fronts of spokes: gold, edged with fine line of white.

Mounting.—Gold.

FAIRMOUNT PARK CUTTER.

Plate No. 3.—This pattern of cutter, when made according to the description given below, will be found to make a beautiful sleigh. It may be painted so as to add greatly to its general appearance by scrolls and ornamented striping judiciously distributed and well executed. There should be no excess of ornamenting, but let there be plain surfaces to contrast with those that are ornamented.

Dimensions.—The bottom side the same sweep as the Albany Cutter, being 24 inches on the outside. The lower panel put in a groove up to the seat line, with 2 inches swell. The upper panel is formed solid, or bent and lapped to the bottom side. It projects 3 inches at the front, and falls into the line of the bottom side at the back, continuing the sweep of bottom side, which produces a round corner. Stanhope pillar fitted, swept off, and lightened on the inside. The bottom side and goose-neck to be bent in one piece, wide enough, when sawed open, to form the pair; the runners lapping to these; the joints covered and secured by the extension of the shoes above the laps. The goose-neck should be bent as short as possible to avoid a *shanghai*, or long-necked appearance, which is a fault with some patterns that have been given to the public. For shoes, use cast steel. Track: 3 feet, 3 inches. The front knee should be framed about 3 inches ahead of the bearing of the runner on the ground. This rule should always be observed by the sleigh builder.

Trimming.—Crimson plush.

Painting.—Body: panels, Munich lake. Runners: black, striped gold and pea green.

HARVARD PONY SLEIGH.

Plate No. 4.—A very genteel appearing sleigh, which will doubtless please the eye of the majority of buyers.

Dimensions.—Width of body: 34 in. on seat; side bevel: 3 inches; boot swelled in to obtain a narrow-seat bearing. The size of running part should vary according to the wants of customers, and the nature of the roads in the section where built. Cast-steel shoes. Track: 3 feet 3 inches.

Trimming.—Green plush, with scarlet plush finishing cord.

ONTARIO SIX-PASSENGER SLEIGH.

PLATE No. 5.—In giving styles for six-seat sleighs, it is of the first importance to furnish designs which are practical. The length required demands that the body should be properly swelled, so as to give a more pleasing outline; also, that the panels should be put in grooves, not only to secure the proper swell, but to furnish a durable piece of work. The boot is of the late fashion, with rounded neck; the seat to be supported by scroll stay. May be provided with half-top or extension. There should be futchels framed in for receiving the pole, which secures the front from damage when a hard strain is thrown on it, as in turning suddenly, &c. Running part to be taken of the best white hickory. Track: 3 feet 6 inches. Steel shoes.

TRIMMING.—Green plush, with yellow plush finishing cord or lace.

PAINTING.—Seats and panels: green, verdigris, or emerald, glazed on milori green. Boot and connecting space: black, scrolled and striped. Runners: light shade Bismarck, striped black and gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER IV.

[Continued from page 185, Vol. IV.]

How we passed the rest of the night after this I cannot chronicle, but I found myself on the beach in the morning without a cap, and without a cent. Two or three others were close by in much the same predicament, only *worser.* A small squad of beach combers were just leaving our airy chamber, and I suppose they took our loose change with them for fear we might lose it. They are a hard set, and would not hesitate to do even worse than rob us. A plunge in the water, a shake like a spaniel gives himself, and my toilet was made, and then in search of a breakfast. I met the captain's steward and borrowed a dollar, and a policeman gave me a cap marked Juniata; some other fellow must have lost it. I got my breakfast and felt better. This was the first time I tasted *turtle butter.* As it is not generally known how this is made, I will state that, at certain seasons of the year, the turtles leave the water to deposit their eggs in the soft sand or earth of the river banks. They come ashore in the night in thousands, and in the morning the natives collect the eggs by hundreds of thousands. They are then put into a canoe or large tub, half filled with water, and then broken with sticks and trampled with the feet. The canoe is then rocked for an hour, then allowed to rest in the sun. Soon a scum or grease rises to the surface, which is skimmed off and put into earthen jars; afterward clarified and shipped to market. To give an idea of the vast number of eggs thus destroyed, there are 2,500 pots, of five gallons each, made on one beach in the *Amazon Mouth.* It is very good, but I don't like it, for it always retains a fish-oily taste. The Indians show great skill and ingenuity in their method of capturing the turtle. They lay down on the bank of the river, and when a turtle shows his head above water, the Indian fires a poisoned arrow *up* in the air; it describes a curve and descends with unerring certainty on the turtle's head. A string is already fastened to the arrow-head, which is loose in the shaft, and wound around the shaft. When the turtle is struck, he sinks, the shaft becomes disengaged from the arrow-head, the cord unwinds, the shaft rises to the surface, and shows the Indian exactly where the turtle is. He follows in his canoe, and when the turtle rises he is captured.

I had so many things to see that I overstayed my liberty, and was black-booked. Charley was brought to the boat on the coxswain's back; he was awful drunk, and did not get ashore for a good many weeks, but he was a hero among the "shell backs" for his prowess in the row, although he got laughed at all through the ship for his adventure with the "tigers," and his discovery of *Rio* Goold.

I, of course, having broken my liberty, did not get ashore again in Rio. We sailed in company with the Unadillo for Table Bay. We kept in company for four days, when we lost sight of her. We had splendid weather until we had run up to the latitude of the Cape, when we caught one of those terrible cyclones, and for three days we had a sweet time. I saw the ocean in all its terrible sublimity. The long, low, pleasant running swell of the south Atlantic, to which we had been used, was now gone, and in its place came the fierce storm-torn mountain billows of the Indian Ocean, driven upon us by a storm which threatened to blow the oakum out of our deck seams, and instead of bowling along steadily with the trade winds, we were now under fore and main topsail, top gallant foresail, fore top-mast staysail and jib, with a gale which had been blowing steady for fifteen hours, and increasing every hour, until now came the order, "take in top gallant foresail and stow the jib." She was even then plunging in too deep, and soon came the order, "*all hands reef topsails;* stand by topsail halyards; man weather braces; topsail reef tackles; let go topsail halyards. Lay aloft there, topmen; take two reefs in them," and in an instant the nimble top-men were "*playing monkey*" up the rigging and out on the yards. The captain of the top, on the weather ear-ring, soon he sings out (or roars) through the gale, "Weather side haul out." "All ready." Two reefs are taken, and the order comes, "Let go; lay down; let go your gear." In an hour more the fore topsail had to be taken in, and the main topsail close reefed. We were now under close-reefed main topsail and fore storm staysail. At about eight bells the topsail was blown away with a report like thunder; the remnant was secured by passing a gasket over it, and the main storm staysail set. She had now little or no canvass to the wind, and the storm was awful; the sea running to a height seldom seen even by the oldest seamen, and our little vessel, when she dropped into the valley between two of these vast water mountains, seemed like that was the last of us; it would appear impossible for her ever to rise again; but, as the sea came toward her, she would begin to lift gradually up, until she would apparently make a bound or spring, and we would be on top of it, looking down into another vast intervening valley between two more monster waves. Another rush and roar of wind and waves, and, with a plunge, she was at the bottom of that one, burying half her decks under, and all the while the way she rolled was fearful, half her decks under *each roll.* Our 150-lb. Parrot gun was an object of great anxiety to us now; it being mounted on a pivot carriage, on deck, every time she rolled there was danger of its breaking loose, and tearing through the decks; *if it had,* it would have been "*all day to us,*" and this would not have been written by Fred. Pumice. We secured it by passing extra lashings around it, and every time the ship rolled the slack was hauled taut, until we had it pretty safe.

Oh, what a night we passed, all hands at their stations. The captain and his executive officer anxiously watching every sea as it raised. By midnight the engineer was ordered to raise steam, (we had been under sail alone up to this time,) for the wind had changed some, and it became necessary to "wear ship," and now the hatches were battened down, the engines were started, so as to give her steering way to bring her head around, and, during a temporary lull in the wind, the ship was safely brought round, and now nothing more could be done but "lay to," and wait for a change.

I was standing on the "top gallant forecastle," at about 8 o'clock, A. M., when, looking forward, I saw a tremendous sea come tearing down on us, and I knew at once it would strike us. The first lieutenant also saw it, and through his speaking trumpet he roared out, "*hold on for your lives,*" his voice rising clear above the noise of the winds and waves. I had barely time to throw myself flat on the deck, and grasp with both arms the standard of the ship's bell, a sort of iron tripod bolted to the deck, the bell hanging between, when, with a rush and roar, as if the gale had centered all its strength and fury in one grand effort to destroy us, the immense mountain of angry waters came bowling over the knight-heads, and fairly buried the ship. For a moment she stopped, trembled, gave one fearful roll, and began gradually to rise on the next wave, a perfect cataract of waters rushing through the open ports and scuppers. The sea broke against the quarter deck, then rushed forward again, then back in diminished force and volume, and as the gallant "Comansioux" raised on top of the wave she shook herself and plunged lightly forward, as if she was imbued with a knowledge of the danger she had carried us through. Of the crew none were lost or injured, except the captain of the "afterguard," who was struck by a piece of one of the ports, which was driven in by the sea; he had three ribs broken. The timely warning of Lieut. Bross saved some of our lives. The gale moderated gradually, and in twelve hours we had again set our jib and lower topsails, and were bowling along merrily toward the southern point of Africa, "*the Cape of Good Hope.*" Next day "Land ho!" came from the look-out, and shortly Table Mountain could plainly be seen far away like a heavy flat cloud.

As we drew nearer its form appeared to change, and now it looked exactly like the walls of a great fortress, and the closer we got into the land the more its likeness to a fort increased. I had often heard that this was its appearance, but I could scarcely be convinced that it was indeed the celebrated Table Mountain, and not a structure of men's hands. Geographically, this must, indeed, be a valuable piece of national property, and England, far-seeing, knows it, and will keep it.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

COLOR.

BY J. H. T.

Continued from page 188, Vol. IV.

27. So the tincture of red roses, in fair water, would be turned into a thick green, with the solution of minium in spirits of vinegar; and then, with the addition of the oil of vitriol, the the resolved lead would precipitate white, leaving the liquor of a clear high red color.

28. It has not yet been found that, to exhibit the strong variety of colors, there need be any more than these five applied, viz: white, black, red, blue and yellow; for these, being variously compounded, exhibit a variety and number of colors; so many that those who are strangers to painting can hardly imagine.

29. So black and white, variously mixed, make a vast company of light and deep grays; blue and yellow, a great variety of greens; red and yellow, several orange tawnies; red and white, a number of carnations; red and blue, several purples; and thus are many colors produced, for which we want names.

30. Acid salts destroy a blue color; sulphurous, urinous or fixed restore it.

31. Acid and alkalisate salts, with many bodies that abound with sulphurous or oily parts, will produce a red, as is manifest in the tincture of sulphur, made with lixiviums of calcined tartar or potashes.

OF PREPARING COLORS IN WATER.

Colors, according to their nature, have each a particular way of preparation, viz: by grinding, washing, or steeping.

The chief colors to be ground are, white lead, ceruss, cinnabar, lake, ochre, yellow and brown, pink, indigo, umber, Cologne earth, Spanish brown, ivory-black, lamp-black, Indian red, and Indian lake.

The chief colors to be washed are, red lead, masticot, green bice, smalt and verditer.

The chief colors to be steeped are, sap green, saffron, turn sole, stone blue and French berries.

THE METHOD OF GRINDING COLORS.

Be sure that your color is free from all filth, then lay it upon the stone, and, with the muller, bruise it a little; then put to it a little spring or weak gum water, and grind all well together, till the color is very fine; which done, pour out, in certain hollows or furrows in chalk stone, and there let it lie till it is dry.

Take care in grinding your colors not to put too much water to them on the stone, for they ought to be ground pretty thick, like pulp or pap, and they ought not to be left too moist, but thick and clammy.

If, after your color is dry in the mould, you can rub it off with your fingers, it must be better bound with gum; and, if there be too much gum, it will shine, and be apt to crack off after it is used.

OF MIXING AND COMPOUNDING COLORS.

An ash color or gray is made by mixing white and lamp-black, or white with sinaper, indigo and black.

To make an azure or blue.—Mix the azure with glue water, and not gum water.

A bay color.—Mingle vermilion with a little Spanish brown and black.

A bright crimson.—Mix tincture of brasil with a little ceruss ground with fair water.

A crimson lake.—It is usually made of the flocks shorn off from crimson cloth by a ley made of saltpetre, which extracts the color, which precipitate, edulcorate, and dry in the sun or in the stove.

A flame color.—It is made of vermilion and orpiment, mixed deep or light at pleasure. Or thus: take red lead and mix it with masticot, which heighten with white.

A glass gray.—Mingle ceruss with a little azure.

Excellent good greens.—The liver of a lamprey makes an excellent green, and yellow laid upon blue will change into green; so, likewise, the juice of a blue *fleur-de-lis*, mixed with gum water, will be a perfect and durable green or blue, according as it is used.

A light green can be made of pink or smalt, with white to make it whiter, if need require.

A lead color.—It is made of white mixed with indigo.

A flesh color.—Mix a little red lead and lake with white, a very small quantity of each; you may make it as light or as red as you please by putting more or less white with it. If you would have a swarthy complexion, to distinguish a man's flesh from a woman's, put a little yellow ochre with it, and for your shadow, put a little more lake, and a small quantity of burnt umber.

To make a murrey, which is composed of purple and white. It is made thus: take cinnabar lake, two ounces; white, one ounce, and grind them together. Another: temper roset with a little rose water, in which a little gum has been dissolved, and it will be good, but not better than the first.

A pure lake.—Take urine, ten pounds; boil it in a kettle, and skim with an iron skimmer, till it is reduced to eight pounds, to which add gum lake, half a pound; alum, two ounces and a half; boil all till well colored, which you may try by dipping a piece of linen cloth in it; then add rock alum, in powder, a sufficient quantity; strain it, and let it stand; strain it again through a dry cloth till the liquor be clear; that which remains in the cloth or bag is the pure lake.

A deep purple.—This is made of indigo, Spanish brown and white.

Another purple.—Boil logwood in vinegar or beer, in a glazed earthen vessel, adding thereto a little alum, till you taste it to be strong on your tongue; when it is sufficiently boiled, strain out the liquor through a cloth, and keep it in a glass-stopped bottle close for use.

A pear green.—Take white tartar and verdigris, temper them with strong white-wine vinegar, in which a little gum arabic has been dissolved.

Cloud colors.—You may sometimes take blue verditer, sometimes light masticot, shadowed with blue verditer, or lake and white shadowed with blue verditer.

To make a red color.—Take the roots of the lesser bugloss, viz: alkanet, and beat them, and strain out the juice, and mix with alum water.

A scarlet color.—It is made of red lead, lake and vermilion; in this case vermilion is not very useful.

A purple of the purest kind.—Take fine brimstone, an ounce and a half; quicksilver, sal ammoniac and tin, of each, one ounce; pulverize the salt and brimstone, and make an amalgam with the quicksilver and tin; mix all together, which put into a heavy glass pot, make a fire under it, and keep it in a constant heat for the space of six hours.

A saffron color is made of saffron alone by infusion.

To make vermilion.—Take brimstone, in powder, four ounces; mix it with quicksilver, a pound; put it in a crucible well luted, and, upon a charcoal fire, heat it till it is red hot, then take it off and let it cool.

To make a velvet color.—Take a little indigo and tincture of brasil, grind them with a little ceruss.

To make a yellow.—Take the yellow chives in white lilies, steep them in gum water, and they will make a perfect yellow. The same from saffron and tartar, tempered with gum water.

TO HELP THE DEFECTS OF COLORS.

Some colors, as lake, umber, and others which are hard, will crack when they are dry; in this case, in tempering them, add a little white sugar candy, in very fine powder, which mix with the color and fair water.

TO BURN OR CALCINE COLORS.

This is done in a crucible, covering the mouth of it with clay, and setting it in a hot fire till you are sure it is red hot through; which done, being cold, wash or grind them.

TO PREPARE SHADOWS FOR COLORS.

White is shaded with black; and, contrariwise, yellow with umber and the ochres; vermilion with lake, blue bice with indigo, black coal with roset, &c.

TO WASH COLORS.

Put the color into a glazed vessel, and put fair water to it plentifully; wash it well, and decant after a while the water; do this six or seven times. At last put the water, being just troubled, into another glazed vessel, leaving the dregs at the bottom; then into this second vessel put more clear water, washing it as before till the water, being settled, be clear, and the color remain at the bottom. Before you take the color out of the vessel, spread it very thin about the sides thereof, and when it is dry, some of it will fall to the bottom, which keeps by itself; but the remainder, which sticks to the sides of the basin, is the best of all, which, with a feather, strike off from the sides of the vessel, for it will be finer than any flour.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 7.

BY J. H. T.

Sympathetic inks are such as can be made to appear and disappear very suddenly, by the application of something that seems to work by sympathy.

1st. Take unslacked lime, two or three parts, and one of yellow orpiment, reduce them to powder and mix them, adding to them fifteen or sixteen parts of water as you have orpiment; put them into a glass bottle or vial, and stop them with a cork, and set it in warm embers, shaking the vial now and then for a few hours, and then warily decant the clear part, or rather filtrate it. In the mean time, burn a piece of cork thoroughly, and when it is well inflamed, quench it in common water or rather in brandy. It being thus reduced to a friable coal, grind it in fair water, in which gum has been dissolved, and it will make a liquor as black as common ink.

While this is preparing, dissolve a quantity of red lead in three times as much strong vinegar over warm embers, or of saccharum saturni in three times the quantity of water for three hours, or until it has a sweet taste. This liquor will be as clear as common water.

Having prepared the inks as before directed, write what you would please on paper with this liquor, dry it, and nothing will appear. Over the place write what you please with the second liquor, and it will appear as common ink. When it is dry, dip a piece of rag or sponge in the first liquor, rub it over the written place and the black writing will disappear, and that wrote with the invisible ink will appear black and legible.

Again, take a book four or five inches thick, on the first leaf write anything you please with the last liquor, turn to the other end of the book and rub these with a rag dipped in the first liquor on that part as near as you can guess opposite to the writing, and leave also the rag there, clapping a paper over it. Then shutting the book nimbly, strike four or five times smartly thereon with your hand, and, turning the other side uppermost, clap it into a press, or lay it under a weight for a quarter of and hour, or half that time, then will the writing, done with the invisible ink, be found legible.

2d. Dissolve white or green vitriol in water, and writing with the solution, nothing will appear.

Boil galls in water, and dip a linen rag in the decoction, and with it rub the place written before, and it will appear black and legible.

Rub it over gain with spirit of vitriol, or its oil, and the writing will disappear again; rub it over again with oil of tartar, per deliquium, and the letters will appear again, but of a yellow color.

For the Coach-Makers' International Journal.

BOILED HUBS.

Mr. Editor:—I have waited now three months for Spoke Shave to redeem his promise, or finish cooking his hubs, but he seems either purposely, or otherwise, to have forgotten it. From his communication on page 139, Journal No. 9, we are forced to one of two conclusions, namely: either he never made any wheels, nor watched very close while others were making them, or he is partially insane. It cannot be the latter, for crazy people, you know, never think others crazy, consequently he would not have accused me of raving. Assuming the former conclusion, I would venture to inform him that it is not absolutely necessary to make the mortice in a hub so small that the spoke cannot be driven down to the shoulder, and then steam the hub to soften it, and punch the mortice out larger with the spoke, in order to have a good wheel. Neither is there any danger of a spoke being shattered, by the shoulder coming in contact with the face of a dry hub. If he had said that, by steaming the hub, the spoke could be driven down to the shoulder, whether they are properly fitted or not, I think he would have said about all there is to say in favor of steaming hubs.

The strength of a wheel is oftener injured by the shoulder of the spoke being driven into the hub too far, thereby shattering the grain of the wood around the mortice, than it is by the shoulder not being down solid on the hub, which I deem to be all that is necessary to the strength of a wheel. It is not necessary to use any argument to convince any sane person that, after the grain has been broken in a piece of wood, the strength of it is materially injured, whether it has been steamed and broken by a shadow, (Spoke Shave's comparison,) or forced in its natural condition.

Theory alone would never make a good wheelmaker of a man, but he must practice it. The same treatment will not answer for every set of spokes, nor every set of hubs. Many valuable hints, however, may be gathered by each contributing his own ideas, if they do sometimes talk nonsense; as to that, we must take Graduate's advice, and sift it before swallowing it. He very sensibly vacates the premises he assumed at first, and contents himself with exercising a little wit, which is very acceptable, if it is at our own expense, and winds up by advising me to buy a Journal myself, which I shall do whenever the proprietor ceases to furnish one for me.

I hope Spoke Shave will not think too hard of me for classifying him with Graduate, but I should feel worse about it if he would explain how boiling is injurious, and steaming beneficial to hubs.

One thing, very essential to a good wheel, he entirely overlooked in his communications on wheel-making; that is, the proper proportions for a spoke. It is not uncommon to see them sadly out of proportion.

When any accident happens to a wheel, we notice that the spokes almost invariably break off at the shoulder, or the tenon is drawn from the mortice. At all events, that is the case about here. Now I hold that if the spoke is proportioned as it should be, it will be no more likely to break at the shoulder than it would two or three inches from it.

I mean by this that the spoke should be lightened out near the shoulder just to that extent, that it would be as likely to break two or three inches from the shoulder as at it. The shoulder, resting on the hub, is, of course, expected to help some at that point. If the shoulder is too large, in proportion, it is very apt to be split up by the vibrations of the wheel.

A spoke, properly lightened out, is no more liable to spring, or become crooked, than one that is left heavy, and much less liable to get loose in the hub, and looks much better.

The strain that comes upon light carriage wheels is usually sudden, and as suddenly over. If the spoke is properly lightened out, it will give a little, thereby making the strain on the tenon materially less than it would be if the spoke was left heavy, and a sudden strain, that would not injure one wheel, would entirely ruin the other, both wheels being alike, except the proportions of the spokes. As Spoke Shave seemed somewhat nettled by my former communications, I hope, in future, he will be a little more prompt, when he promises bears, in bringing them on, for the children are waiting.

Victim.

For the Coach-Makers' International Journal.

SUCCESS IN LIFE.

Every one wishes to succeed in life, and success, attained by honorable means, is a duty. The goals of the travelers, who start upon the highway of life, are as various as the tastes of man; one seeks political distinction, another military renown; a third literary fame; a fourth the laurels of the artist, a fifth, perhaps, aims at attaining pre-eminent skill in some handicraft. Too many pursue wealth, not as a means, but as an end. At first, and to the eyes of youth, the attainment of each of these objects appears easy. In the mirage of life's young dream, each favorite object looms up distinctly, and near at hand, and it seems as if it required but a few rapid strides to grasp them.

But, as mile after mile is passed, and hour after hour glides away, we see the phantom recede before us, as the mountain recedes before the approaching tourist. We see that there are flinty paths and deep ravines, and wild, whirling streams to be traversed before we reach the prize, and the faint-hearted come to think that the coveted good is unattainable. Success is only attainable through persevering labor, which involves an iron will.

In our copy books, at school, we are taught to write over and over again, that "Labor conquers everything," but personal experience, or that of others, only can teach us that "nothing is impossible with him who wills." Will and labor are more than a match for "those twin jailors of the heart, low birth and iron fortune."

A young French officer was often heard to say to himself, as he paced his narrow quarters, "I will be a great general, and I will be a marshal of France;" and he became both. The Duke of Marlborough, as he sat shaking in his saddle, on the eve of a terrible battle, was wont to exclaim; "See how this little body trembles at what this great soul is about to achieve." This was not the boast of a vain man, but the declaration of one who knew that his iron will would override every obstacle, and, in the might of its inflexibility, reach the goal of victory at last.

The determination to succeed works miracles. It gives the man, apparently most unfit to succeed in any given walk, a mastery over adverse circumstances, and a triumph over rivals favored by nature. "It is quite alarming," says Victor Hugo, "to see the catalogue of preparatory studies marked out for apprenticeship of the general;" but how many excellent generals there have been who could not read. It would seem the first condition, the *sine qua non* of every man destined for the wars, that he should have good eyes, or, at least, that he should be stout and active. Sure enough.

But a crowd of great generals have been one-eyed or crippled. Philip was one-eyed, lame and maimed of one hand; Hannibal was one-eyed; Bajazet and Tamerlane—the two thunderbolts of war, in their age—were, the one lame, the other half blind; Luxemburg was hunchbacked. It seems even that nature, in ridicule of all our calculations, had wished to show us the phenomenon of a general totally blind, guiding an army, and marshalling his troops for battle and winning victories. Such a man was Ziska, chief of the Hussites.

One would think that to be a distinguished painter, hands, at least, were necessary; but there is an excellent European artist, born without hands, and who manages his brush and crayon with his feet, more dexterously than many a professional painter endowed with flexible fingers. There is a case on record of a crippled shoemaker in England, so unfortunate as to be able to move about only on his hands and knees, yet who drained, reclaimed and cultivated one acre of land, stocked it with fruit trees, and raised from it six hundred dollars worth of produce in a year. After such examples, who of us need be discouraged.

It is in this disbelief in impossibilities which has rendered our own beloved country the wonder of the Universe. Never before were a whole people imbued with such zeal for labor and such determination to succeed. Look at the result. A continent cleared of primeval forests, States established, peopled, supplied with churches, schools, roads, libraries, manufactories, arts; the deep-rooted oaks and pines of centuries building a magnificent mercantile marine, that bears our flag and our wealth to every quarter of the globe; a net-work of railroads and canals and telegraphs, linking the whole territory between the Atlantic and Pacific, and lakes and the gulfs together, in body and mind; and all this accomplished in about two centuries and a half, by the invincible force of united will and labor.

J. H. T.

SPECIAL NOTICE.

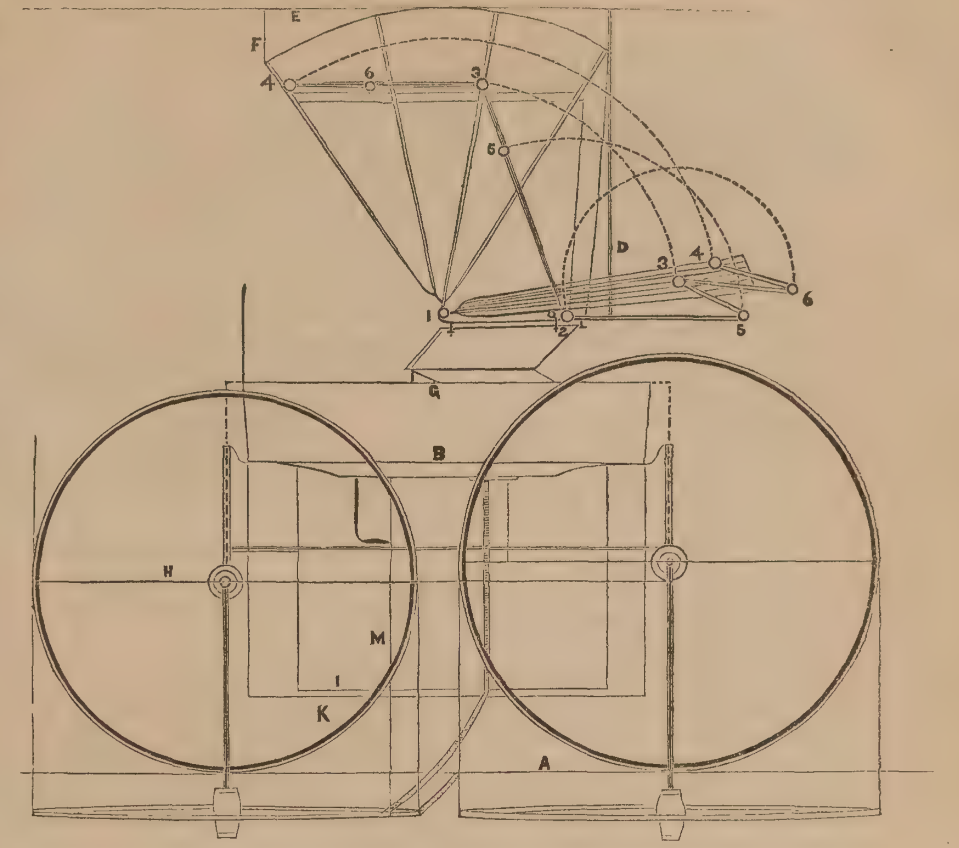
Expiration Notices to subscribers of the Journal will hereafter be given by a blue X on wrapper, or cover, next the name. Should any mistakes occur please notify us at once. Our rule is to discontinue unless informed to the contrary.

PENCIL RULE & SQUARE

D. BOARD EDITOR

SCALE DRAFTING.

(Continued from page 187, Vol. IV.)



This diagram illustrates the manner of laying out for a correct scale draft of the "Monitor" pattern, being the simplest one we can treat on.

First, we shall establish the base line, holding that the base is the foundation of all mechanical structure. Second, the height of the wheels, carriage-part to the top of spring-bar, distance of the same apart. Third, the laying out of body, also the top in two positions, demonstrating the points for the knuckles in the joints. Fourth, we illustrate the point where the front wheel will strike the body in turning, establishing the place for the wear-iron, also the space between the front and hind wheels on a turning point—having your drawing-board, with paper secured to it with fastening tacks. It will be necessary for the beginner to be well versed in the *scale rule*, which we have illustrated and described in the August number. The scale that we are using to this drawing is half inch to the foot, (U. S. standard,) the half inch being divided into twenty-four equal parts, each part representing a half inch, each two parts one inch.

We will now proceed and lay out the pencil sketch, (use Faber's No. 4.) Place the T-square on the right hand edge of the board, and draw the base line A. Next establish the height of the wheels, which is 4 feet and 4 feet 4; also, the distance from centre of wheels or axles, which is 54 inches. This distance allows a 50-inch body on bottom, and gives the right space for forming the body loops. Set your pencil compass 26 inches, being half the height of the hind wheels from the centre point established, and 24 inches being half the height of the front wheels; also, draw the hubs 3½ inches diameter; front band, 2⅜; back band, 2⅞. Now proceed and lay out for the height of the spring-bars—back bed, 2¼ sweep, 1⅜ deep in centre; springs, 11 inches over all, 1¼ wide, 1½ inches deep for the spring-bar, making in all 15⅝ from centre of the hind wheel to the top of spring-bar. The front bed 2 inches sweep, 1⅜ deep; fifth wheels, 1 inch; spring-block, 1½; springs, 10¾ over all; spring-bar, 1½ deep, making in all 17⅝ from the centre of the front wheel to top of spring-bar, which levels for the loops. We give these dimensions of the carriage, being a matter of taste, but the principle illustrated remains the same.

Proceed and lay out for the width of springs and draw them. Measure from base line A 39 inches, draw line B, which is the bottom line of body, which drops 2½ inches from top of spring-bar. Measure from B 10 inches, and draw line C, top line of body. Measure on line B, from front and back springs, 2½ inches, and prick it off, which leaves the body 4 feet 2 inches long on the bottom line. Now proceed and draw the two ends, giving ¾ inch bevel to each.

When they are drawn square, the top line of body C will appear shorter than bottom line B. Measure from line B 2 inches, and draw the concave rocker; also, sweep the ends as represented by the diagram. You can now dot off the loops, steps, perch, and lay out the dash, which is 11 inches from top of body. Measure from front of body, on line C, 21 inches; this being the front of the seat, 15¾ for the depth, seat elevated sufficient to bring the bottom edge of skirting on top line of body. Measure 4¾ inches from seat-frame for seat-panel, give ¼ inch slope, and draw this line. With the rectangular protractor lay off the back and front bevels to degrees to suit taste. You will now lay out and draw the line for shifting-rail, turn the gooseneck for the slat-irons with the pencil spring-bow pen. Measure from top line, back of seat, 4 inches, draw perpendicular line D, also measure 45 inches from top of seat-frame, draw the top line E. Measure from line D 42 inches, and draw line F, this being the height, length, and back flare of top. The top sweep has 4½ inches round, 1 inch lower front than back; it is on a circle of 78 inches. The needle point of compass is placed at the centre point of gooseneck for receiving the slat-irons; this will strike the sweep. Proceed and space off and draw the bows, and establish the props, Nos. 2, 3 and 4, and draw the joints for establishing the different points for the stub-joints, illustrated in top laying down by Nos. 5 and 6.

We will now lay out for establishing the point where the front wheel will strike the concave rocker, and where the wear-iron should be placed. You draw centre line H, being the centre of body, and the centre point of the front wheel, representing the centre of king bolt, and the centre of axles. Line I represents the outside of concave rocker, and K the body.

Draw the wheels below line A, as represented in the diagram; these represent half the track from centre line H. Draw perpendicular line M; this takes the size of the wheel on a line with the concave rocker. Now, with the pencil compass, place the needle point in centre of front wheel, being the centre of body-bolt, which strikes the circle to line I, which represents the concave in the rocker. From this point, squared to the body, will give the exact place for the wear-iron. The short circle shows the distance between the front and back wheels in turning.

This principle illustrates how close the front and back wheels can be brought together with safety.

THE following advertisement lately appeared in a country paper: "To Piano Forte Makers.—A lady keeping a first-class school, requiring a good piano, is desirous of receiving a daughter of the above in exchange for the same."

WHEEL HORSE & MALLET

SPOKE SHAVE EDITOR

It is with renewed energy that I enter upon the labors of another year. It shall, in the future, as in the past, be my object to lay before the readers of Spoke Shave's Department, what I conceive to be a correct principle upon which the wheel should be constructed. Should my method differ from others who are my *seniors* in the business, I should be pleased to hear from them, in the spirit of an honest difference. All I shall ask or expect at the hands of my fellow craftsmen is an honest version of what I may have to say.

I am aware that there have been some few, say two, that have differed, and I am sorry to say that, in their objections, they have misrepresented (*perverted is the word*) my articles as referred to. It is not my mission to excite a controversy in my department. I am not one of those that *boil over*, even should I become the victim of misplaced confidence. After eighteen years experience, should I boil hubs as my better half would the potatoe, I would be the last one to cry victimized.

J. A., of Middlebury, Vermont, refers to page 138, and in No. 2, Vol. IV. I shall refer to page 186, and pay J. A., or the I am, my respects to the same, for his culling perversion of the sentiments of said article. I should be pleased to discuss with either of above the question heading this department, if it could be done in a conciliatory spirit; in a spirit that would carry conviction to the mind of every reader of the JOURNAL, in order to do good, and to elevate the wheel department to its legitimate position in the *trade;* but to cull over its pages, and misrepresent the *pith* of what is therein contained, is, to say the least, demoralizing to its columns, and unfair to the representative of said department. I would not insult the readers by falling back upon sarcasm, as a support to what would otherwise be a lame argument.

Let us all lay aside, in the present volume, everything that is calculated to detract or confuse, in any way, the mind of the reader, and with the closing of No. 12, no one will say but what he has been more instructed than amused.

WHY DO WE OIL OUR WHETSTONES?

We oil our whetstones for several reasons. The first is that almost all stones, unless oiled, become glazed or burnished on the surface, so that they no longer abrade the metal. The second reason is that most stones, after being oiled, give a finer edge than they do in a dry or merely whet state. The pores of the stone become in a measure filled up, and, while the action is rendered continuous, its character is altered. A dry stone is very apt to give a wire-edge to a tool, and although this sometimes happens when oil is used, yet it does not occur nearly so often. Some stones work better with water than oil. It has been said that a little carbolic acid dissolved in the water which is used to moisten a whetstone or a grindstone will greatly increase the friction, and thus promote the action of the stone upon the steel instrument. If this be true, and there be no unforseen drawback, carbolic acid will prove invaluable to all who have to sharpen tools or grind metallic surfaces.—*Mining and Scientific Press.*

HAMMER SLEDGE & ANVIL

V. ULCAN EDITOR

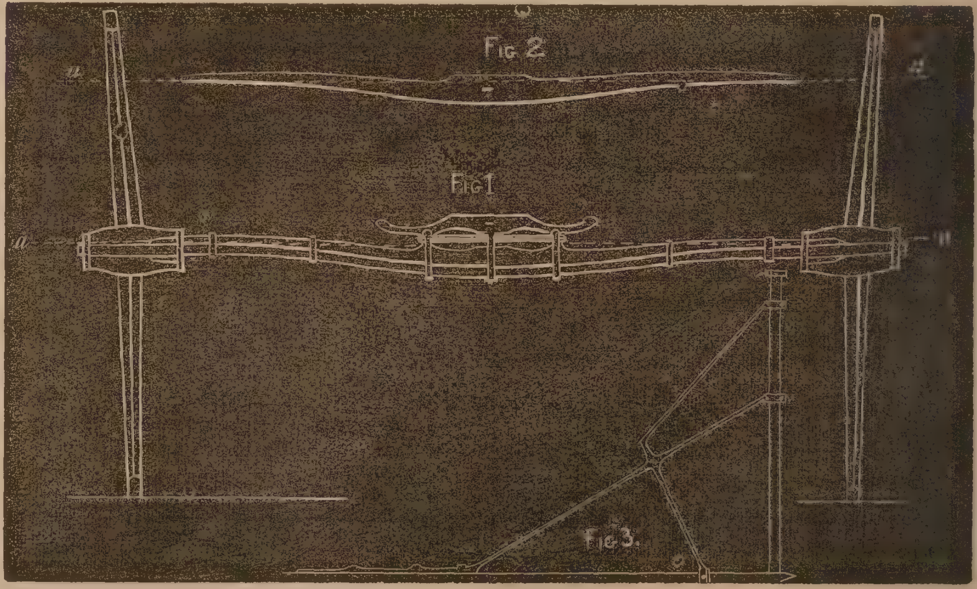
THE IRONING OF A CARRIAGE PART.

The carriage part of a rockaway is a fit specimen for plain ironing, inasmuch as it is closely connected with the higher order of four-spring and eight-spring carriages.

Our job, drawn out, has bent axle beds, wheels 3 feet 4 inches by 4 feet, hub 7 inches by $4\frac{5}{8}$ inches, $1\frac{1}{4}$ by $1\frac{3}{8}$-inch felloes, spokes $1\frac{3}{8}$ by 1 inch, and illustrate many ideas spoken of in our former articles now brought together as a finished job.

The axle bed serves as a pattern, not only for the shape of the axle, but for the width of track, which is calculated to be 4 feet 8 inches. Supposing a smith would have to iron a carriage different from such as he has already patterned out, then he must set himself to work out just such a drawing as the one in Fig. 1. It is a medium bent axle, but just enough to give it a graceful curve at the shoulder of the axle, which would degenerate into an ugly kink if bent shorter.

The axle arm is $7\frac{1}{2}$ inches long, even with the back of the hub and the flange of the nut let into the front of the hub. It has scant $\frac{3}{8}$ inch taper, while the wheel has $\frac{1}{2}$ inch dish. This gives 4 inches more width at the top than the bottom of the wheel, and brings the lowest spoke plumb. As the welding of an axle shank is familiar to every smith, we need only say that the bottom side of the axle is slightly rounded, and left square at the places designed for the clip. The reach generally runs parallel with the bottom of the body, at a distance between 10 and 11 inches from the latter. The hind wheel is 4 inches higher than the front one. Bodies of a straight or slightly curved bottom side have these 2 inches, or half the difference in the height of wheels made up by the lessening of the bend of the hind axle $\frac{3}{8}$ inch, shown by dotted lines *a*, *a*, (Figs. 1 and 2.) The bearing of the fifth wheel clip $1\frac{1}{8}$ inch, the thickness of upper and lower fifth wheel, made of $\frac{3}{4}$ inch half round iron $\frac{7}{8}$ inch, and the mortice in head block $\frac{3}{4}$ inch above fifth wheel, making $2\frac{3}{4}$ inches in all; from which deduct $\frac{3}{8}$ inch less bend of hind axle bed, further the mortice in hind axle bed, being $\frac{3}{8}$ inch higher than that of head block, measuring from bottom of head block and axle bed, which leaves the two ends of the perch at the same distance from your base line. This answers for our special case. Very irregular bottom sides demand crooked reaches; one tenon as much as 5 inches above the other, then the shape of the box loop regulates the space for the spring.



The iron plate lining the under side of the perch is made of 1 inch half-oval iron, left flat 12 inches from the head block, where it is welded to the plate of the head block, and gathered up to 5-16 inch in the middle, forming the socket for the king bolt. Measure angling from head block to end of hind axle bed to get it perfectly square. The flat space of the reach plate, mentioned before, forms the surface for the fitting of the fifth wheel clip, bolted to it, also the king bolt stay. The reach plate also forms a clamp at the back end, fitted tight around the hind axle, running up to the bottom of axle bed, rounded and finished half oval.

Place a strong straight edge under the wheels, and measure up to the axle, at equal distances, to get your curve true. The springs are made to range, and to stand square, by measuring to end or bolt from a straight edge placed on the floor. This done, measure crosswise, from bolt to bolt, to get them square. The springs are set drooping ½ inch to have them come plumb after the body rests on them. The spring bars are handled in the same manner, and in line with the face of spring. The two bolt holes weaken a spring bar; and in good shops narrow clips are used in place of the bolts. Fig. 3 shows the manner in which the stays, made of half-round iron, are applied. The idea is partly derived from an illustration in our last number. The cross rods are steadied by small scolloped flanges at their intersection, of the same thickness as the stays, and round edged. The long stay strikes the reach 26 inches from the hind axle.

In response to an inquiry, whether a skeined axle runs easier on a rough road than a small metallic one, we hold out that skeins are apt to spoil the true shape of a wooden axle; the wood wearing out, and the skeins change from their original circular shape to a slightly tricornered, or broken outline. Our idea for making wooden axles wear, and work easy, is, to make them of hard wood, and let a strong cast-iron box, ⅛ inch thick, into the hub, which will not get heated by friction, and therefore keep true, and will last. The play of such axles cannot be imparted to steel axles.

STEEL FOR MACHINERY.

A daily contemporary thus sketches the difference between what now forms a very large proportion of the steel manufacture, and the product to which the term was formerly exclusively applied:—"To unprofessional readers, the term steel signifies a hard, brittle, highly elastic alloy of iron, granular and white in fracture, and capable of being hardened and tempered for cutting tools. And yet not one-quarter of the steel of any name produced and sold to-day would answer to any such description. The hundreds of thousands of Bessemer and other machinery steel annually produced, more nearly resembles wrought-iron, in all respects, except structure. It is softer and less elastic than tool steel, as ductile as wrought-iron, malleable at a high heat, incapable of hardening sufficiently for tools, gray, and when very soft almost fibrous in fracture. But when it is compared with wrought iron, the differences are more remarkable than the resemblances. While wrought-iron is welded up from numerous small pasty masses of puddled (decarburized) pig-iron, and is only freed from cinder by repeated welding, steel is cast from a liquid mass, which, from the fact of its fluidity, is homogeneous, uniform, sound, and pure. The greater part of the steel now made is substantially cast wrought-iron. If it were hard and brittle like tool steel, it would be unfit for rails, axles, machinery, and the thousand uses where it receives violent blows and strains. If it were welded and heterogeneous in its structure like wrought-iron, it would—witness iron rails the world over—laminate, wear, and deteriorate irregularly and rapidly under great stress. But, being both ductile and homogeneous, modern 'low' or 'mild' or machinery steel, as made by crucibles, or by the Bessemer, the Martin, or other processes, is exceedingly durable under every variety of strain and wear, and has already wrought a revolution in the proportions and capacity of machinery."—*American Artisan.*

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 188, Vol. IV.)

INDIAN RED

Is a very strong color, and always of service to the carriage painter, especially in forming the ground work for transparent colors, such as lakes of a reddish or purple cast, carmine and the darker shades of Bismarck. Mixed with lampblack it forms the most durable under-coatings that can be obtained, where a brown is needed.

With white a flesh color is formed, making a good ground work for American, Chinese, or English vermilion.

It covers and works well for broad line striping on black grounds, but is not rich enough in color of itself, except on cheap work. By adding lake, a richer tone is secured, which will cover well, and save the time and expense of glazing, when it is important to gain time.

It serves well as a shade for vermilion on letters, scroll work, or shaded striping.

On straw color, and other light grounds, it assumes a darker appearance in contrast, which may be corrected by changing the color by the addition of vermilion.

The best Indian red is of purple cast.

RAW UMBER

Is used to a considerable extent, and is indispensable to the painter. With blue and yellow, it forms a a very pleasant range of modest greens.

In combination with white and yellow, gives drab tints, or stone color, which may be saddened with black, or enriched with vermilion or lake. In mixing a light striping color, which may have too much of a raw, yellowish cast, a small quantity of raw umber will correct the defect. It is a useful color in shading on white, and may be classed among our most useful colors.

CHROME GREEN,

Used clear, has a coarse and offensive appearance to the majority of persons, and is seldom used by the carriage painter, except in combination with other colors, and even then very sparingly.

Mixed with Prussian blue, drop and lampblack, the greens obtained are dull, and not to be compared with those from the mixture of Prussian blue with Dutch pink; but, as a ground work, it answers every purpose. And greens, like lakes and other transparent colors, have to be glazed to obtain richness. With white, various delicate pea-green and other tints may be made. It can be heightened with yellow, forming brighter tones of green, or saddened with black.

It will be found useful in correcting a color which is too red, and mixed in small quantities with white, gives a purer appearance to that color, although it is inferior to the addition of ultramarine blue for the same purpose.

LAMPBLACK,

Although possessing a greater body than perhaps any other black, is not suited to the wants of the carriage painter, for the outside black coatings on good work.

Its wearing qualities are superior, but the color is not intense enough to make a passable piece of work. It may be used as a foundation coating, but this plan is not followed by the generality of painters; being, naturally, of a greasy nature, it is not safe for the *carriage* painter to use much oil in mixing it.

DROP BLACK

Is of a deeper tone, (or should be, which is not the case with a great deal of it of late,) and, therefore, is used for the outer coatings. Drop black, when of a dull brown shade, may be partially corrected by the addition of Prussian blue, in the proportion of one part blue to three of black; but this, in the sun, is apt to show changeable; the Prussian blue giving it that tendency. Where the best English drop black can be had, we would advise that it be used clear. White and black form grays of different degrees, according to the proportions used. Grays may be enriched with yellow or red, added in only sufficient quantity to change the tint. In ornamenting, these colored grays will be found of great value.

CHROME YELLOW AND BLACK

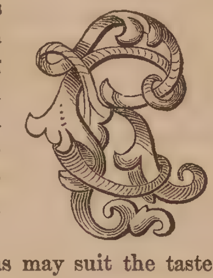
Produce green, which is of a sombre hue, compared with chrome yellow and blue; still they are used a great deal, and are better suited to the wants of the carriage painter, in that they are not so grassy.

Black saddens all colors to which it is added, and is useful in toning them down, where any other color would only increase the difficulty in which the painter often finds himself when attempting to match a color.

Black added to any color of a yellowish cast tends to form green; added to any color of reddish tone it produces brown. It darkens blues, but sullies the color, and so on with other colors it really saddens, and, we might say, robs the color to a certain extent of its purity.

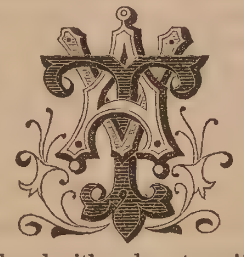
Black may be truthfully named as the most important color in the hands of the painter. A carriage would look in shocking bad taste, were it painted all white, or yellow, or red, or green, or blue, with no relief by striping; but with black, *plain black*, what style of vehicle may not be turned out which will be at least acceptable, and not attract the remarks of the majority of persons as to its unsightly appearance?

Monogram C. R.—In this we have two letters intertwined in a careless manner, as may be seen in nature in clambering vines. It is not intended that they should be formed with great nicety, but rather as if they had accidently united in the form given.

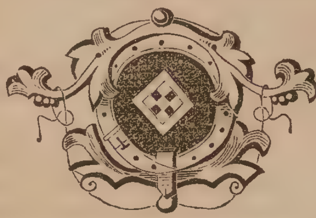


Lay in gold or color as may suit the taste, giving the curves rather an irregular form.

Monogram V. A. T.—This combination forms a pleasing variety, and will afford good practice in the use of the pencil. Lay in the letters as indicated by the shading The letter V to be darker than A, and T deeper in tone than either V or A. The letters may all be laid in gold, and afterward glazed with colors to suit the taste, or the ground-work over which they are to be painted. The delicate vine at the base in color, either a delicate green, tinged with carmine, or purple, red-brown, or a neutral tint.



Ornament.—The garter, with leafing added. Lay in garter gold, the leafing in colors darker than the gold. Keep the colors subdued, and depend on the high lighting to bring out the richness you aim at. Have a pencil for each color, so as to preserve them pure; and where any blending is required, use a clean, dry pencil.



Columbus, N. J., Sept., 1869.

Mr. Editor:—Will you please answer the following questions? Which is the best hair for striping, and which is the best way to mix striping color and bronze? What kind of a japan do the carriage makers use to make the job look blacker than the patent black? Which is the best patent black? How long does it take a good trimmer to trim a top buggy, and what do they pay for trimming one in Philadelphia?

Yours, G. G. H.

Answer to Question 1.—The red and black sable are preferred by the majority of painters, especially for fine line pencils. The sable hair being more springy, it bears the pencil up better toward the point.

For broad lines, on carriage parts, a good quality of camel hair pencils will work very pleasantly, and is preferred by some good stripers.

Answer to Question 2.—Colors that are bad driers, such as the lakes, should be mixed in varnish, or with japan and varnish, and be ground out very fine; they are colors that work unpleasantly.

All other colors may be mixed in varnish, or with raw oil and sugar of lead, and thinned down with turpentine in the operation of striping. Bronze may be mixed in raw oil and japan, boiled oil or varnish, and be applied with the pencil without laying on a size. The most brilliant and durable bronzing is obtained by using a fat oil size, put on very thin. The striping to be run on one day, and the following day rub on the bronze.

Answer to Question 3.—Black japan, which may be had of any varnish manufacturer, or the English black japan, is the article you refer to. It needs careful handling, and unless the painter is very cautious in rubbing it down, he will have a badly spotted job in the sun.

We do not think it much, if any, superior to color and varnish, except that it is free of grit. English drop black is the best.

Answer to Question 4.—A trimmer will take from seven to eight days to trim a first-class top buggy; the cost of which would be $25 or $30.

As a general rule a city trimmer does not have to set his top, put on the irons, cover the dash, &c. In the country a trimmer has to take a hand at every part of the job, make straps, cover the dash and shafts, all of which take up time, for which due allowance should be made.

"HE DIED WITH HIS ARMOR ON."

In the September number of "The Hub," there is a very touching sketch of the life, services, sufferings and sudden death of Wm. F. Merrill, of Saco, Maine, who died at Portland, Maine, June 15th, 1863, aged thirty-three years. In the closing paragraph the writer says:

> "For several years previous to his death, his health was very poor and he was scarcely able to speak above a whisper, but his strength held out to the last; and he labored constantly, often staying in the shop after the rest of the men had left in order to complete some piece of work, and thus be able to better advance the job next day. Many a time did his employer, (Mr. J. M. Kimball,) remonstrate with him for working so hard, and often forced him to take rest. During the last year of his life he did little else but lay the finishing coats of varnish, and to say they were as near perfection as was possible to reach, is praise enough.
>
> On the day previous to his death, he did his day's work as usual, and seemed no worse than he had for a long time; but upon rising the next morning he was taken with hemorrhage and died instantly. Thus passed away a true artist, one who loved his profession and made it his life-work, and *who "died with his armor on."*

While we pause and drop a tear in memory of the departed one, who was so faithful to his employers, and who doubtless shortened his life by breathing the poisonous atmosphere of the paint room, let us bear in mind that there are hundreds of painters to-day, throughout the country, who are gradually undermining *strong* constitutions by close application to their calling. It is not the use of lead or any other pigment, so much as breathing the gases arising from them, which are so injurious. Our paint rooms are not properly ventilated, and as the painter is compelled to close his windows to keep out a draft of air, while coloring or striping, as well as when varnishing in the summer time, and also compelled to be closed up tight in the winter to keep out the cold, it will be seen that there are but few days in the whole year in which he may breathe fresh air.

Temperate habits and cleanliness are conducive to health, and should be practiced by every individual; but they alone will not save the painter from the insidious attacks of the destroyer. It is at the lungs where we must look for the greatest danger to the health of the whole system.

Slowly, but surely, the blood is poisoned by coming in contact with impure air breathed into the lungs, until at length the bones become diseased and the muscles soft and flabby. While in this condition the painter drags along daily through his labors, and unless he quits the shop entirely, will soon be laid upon a sick bed, and, as in several instances which have come under our notice, he may be past recovery.

The assertion that it is only the filthy in habits that are attacked by colic, or other painter's diseases, is mere bosh.

If a man is so lazy that he will not wash his hands before handling his dinner at the shop, and actually swallows his bread and meat besmeared with paint, he should suffer the consequences; but, as the majority of painters wash their hands more frequently than, perhaps, any other branch of the trade, it cannot be the mere handling of colors or paints that is the most injurious.

What is it, then, that the paint room lacks? It is this, a means of upward ventilation. The heated and foul air should have a way of continual escape, so that the rooms could be relieved of a greater part, at least, of their poisonous gases.

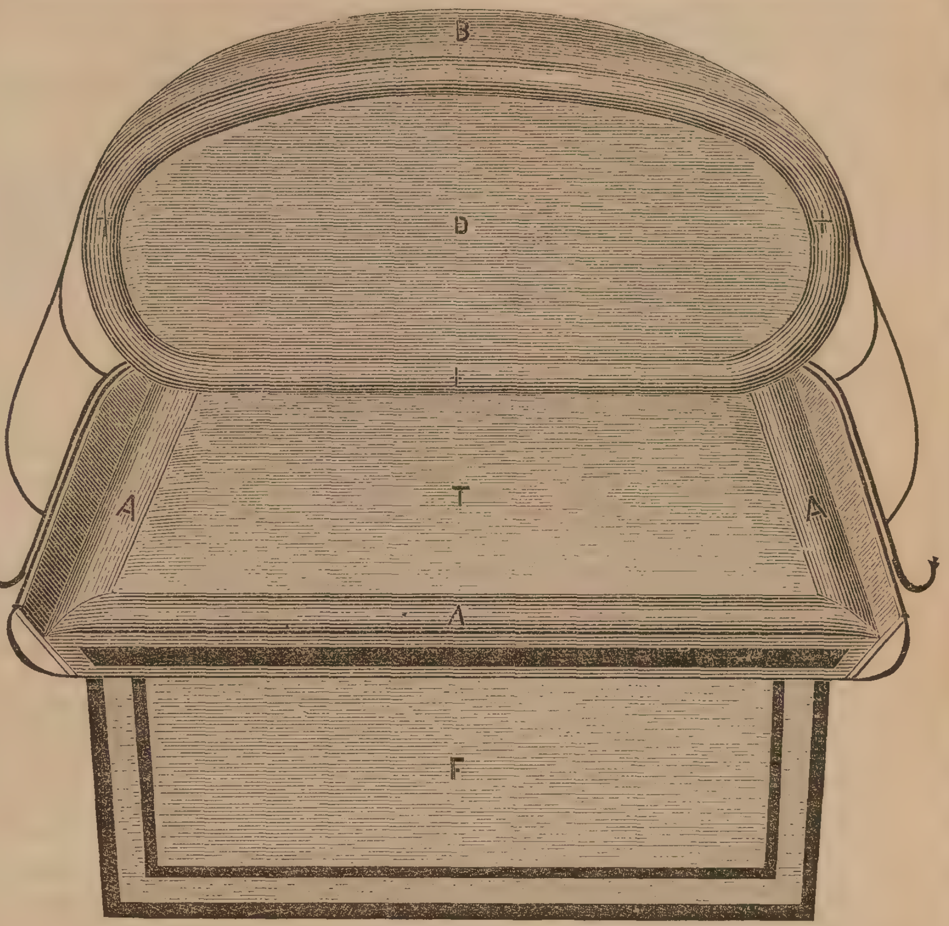
Who will take the lead in running up flues to carry up the noxious vapors from the paint and varnish rooms? Should the painter's step become more elastic thereby, and the color return to his pallid face, the employer will certainly not be the loser for the extra outlay.

Until *some* means is devised to ventilate our paint rooms, we will be compelled to chronicle the untimely death of one here and there who fell at his post, working faithfully in his poisoned jacket.

SHEARS, NEEDLE & TACK HAMMER

T. ACKS EDITOR

OUR NEW STYLE—THE SARATOGA.



BACK CUSHION AND FALL.

The back with smooth centre, wrinkled roll all around, and plain smooth roll on top. The cushion with a smooth centre, and wrinkled roll all around. Is entirely new, and we think it is the very best style of trimming yet introduced for buggy or phæton where the drop-back is used. It looks light, neat, *is economical*, and comparatively easy to make, taking very little if any more time than a plain back done in squares. The cushion will occupy more time in making than the ordinary plain cushion, but I do not think it takes any longer to make it than it does to make a squab-top cushion.

HOW TO MAKE THE BACK.

Use four-ply of buckram, as usual for drop-backs. Cut to within 3 inches of the bottom of the seat, and on the sides out to the edge of the seat; then rounded in to fit against the back of seat in the corners. Mark the upper roll (*b*) 2¾ inches in the centre, and to a point, as shown at both ends. *This is to be a smooth roll.* Next, mark 2¼ inches all around the back for the wrinkled roll, (*x*, *x*, *x;*) then make belly for the centre panel (*d*) of moss, *and pretty hard*, covered with muslin or enameled cloth, sewed down ¼ of an inch inside the inner line of the wrinkled roll. To cut the cloth, lay your cloth (doubled) on the bench, and mark 3¼ inches from the bottom edge of it; then cut out the piece for the centre (*d*) above this mark. Now, mark 3¼ from the outside edge of the cloth for the wrinkled roll, and cut it that width all in one piece around the space left where the centre was cut out. Next, cut the piece for the smooth roll, (*b*) with 2¼ inches fullness at the centre, so that when made it will project well out beyond the wrinkled roll. Now, draw your cloth belly (*d*) very tight lengthwise, even bending the buckram at both ends. This is done so that the back may not wrinkle in the centre when finished. Next, sew patent leather welt on (with rattan in place of seaming cord) for the inside edge of wrinkled roll; then wrinkle your roll to this welt, then sew down the upper edge of wrinkled roll-stuff, and sew patent leather welt on, leaving both ends of welt loose, and long enough to go around the back and meet in the middle of the bottom edge. Next, paste and cover the wrong side of the back with enameled duck, letting it project ¾ of an inch beyond the buckram. Now, sew the loose ends of your welt to this projecting edge, and then blind-sew the three lower sides of the wrinkled roll to this welt, which makes a very good finish.

NOTE.—The smooth roll (*b*) for the top *must* be sewed down to the upper welt of the wrinkled roll before covering the wrong side of the back with duck.

Nail in and finish the top edge with seaming and rubbed-down welt, the seaming to be on inside edge.

THE CUSHION FRONT

Is made of split leather, 1¾ inches wide, and pasted on muslin; then two very narrow raisers pasted on ⅝ apart, *scant;* the ends cut off 1 inch from the ends of facing, then cover with cloth, and paste on a rubbed-down welt neatly between the raisers.

THE CUSHION TOP

Has a plain, smooth centre like the back, and a wrinkled roll 2¾ inches all around, which may be sewed in with or without a patent leather welt.

THE FALL

Is a plain piece of cloth pasted on enameled duck, a rubbed-down welt ⅞ wide pasted on 2¼ inches from the edge, and another on the outside edge, but this is only half rubbed down, the outer edge being left loose, so as to turn it over and bind the fall with it. A small, light pocket or card case is sometimes made in the centre of the fall, and an extra piece is stitched on the wrong side for the purpose of slipping in a fall stick.

The description of how to do this is necessarily very lengthy, and may have the tendency to create an impression that it is very difficult and tedious to do this style of job; but if you try it, you will find it simple and easy, and more, you will be well pleased with "The Saratoga."

Poetry.

IF YOU SHOULD EVER GET MARRIED.

If you should ever get married, John,
  I'll tell you what to do—
Go get a little tenement,
  Just big enough for two!
And one spare room for company,
  And one spare bed within it—
And if you begin love's life aright,
  You'd better thus begin it.

In furniture be moderate, John,
  And let the stuffed chairs wait;
One looking glass will do for both
  Yourself and loving mate;
And Brussels, too, and other things,
  Which make a fine appearance,
If you can better afford it, they
  Will look better a year hence.

Some think they must have pictures, John,
  Superb and costly, too;
Your wife will be a picture, John,
  Let that suffice for you.
Remember how the wise man said,
  A tent and love within it
Is better than a splendid house,
  With bickerings every minute.

And one word as to cooking, John—
  Your wife can do the best,
For love to make the biscuit rise,
  Is better far than yeast.

No matter if each day you don't
Bring turkey to your table—
'Twill better relish by-and-by
When you are better able.

For all you buy pay money, John—
Money that very day!
If you would have your life run smooth,
There is no better way.
A note to pay is an ugly thing—
If thing you choose to call it—
When it hangs o'er a man who has
No money in his wallet.

And now, when you are married, John,
Don't try to ape the rich;
It took them many a toilsome year
To gain their envied niche.
And if you should gain the summit, John,
Look well to your beginning;
And then will all you win repay
The toil and care of winning.

NELLY.

Only a little child,
Who sings all day in the street,
Such a tuneless song
To an idle throng,
Who pity her shoeless feet;
A poor, pale, pretty child!
With clothes so ragged and mean,
And a wild, weird face,
On which ne'er a trace
Of childhood's joy can be seen.

Out in the damp, wet fog,
Out in the sleet and the rain,
Out when the cold wind
Sends its blast unkind
Through her again and again:
Out in the dreadful night,
By the hinge of the tavern door,
In hope she sings
Of the pity that flings
Some pence on the beer-stained floor.

Mothers who pass her by
Shudder with terrible fear,
Praying her fate may
Never be some day
That of their little ones dear.
Children who hear her sing
Stare at her features so wild,
O'er her life ponder,
Thinking with wonder,
"What, can she, too, be a child?"

Out in the damp, wet fog,
Out in the sleet and rain,
Out when the cold wind
Sends its blast unkind
Through her again and again.
Brought up in Satan's school,
Hell's abyss falling in.
Is there no pity
In this great city
To save her from shame and sin?

Youth's Department.

For the Coach-Makers' International Journal.

A VIEW OF GREYTOWN.

(Continued from page 190, Vol. IV.)

BY DABBS, JR.

In Central America are to be seen, in all their native grandeur, animals, trees and plants, which we rarely, if ever, see in the United States.

There the grand old CACTUS attains a height of fifteen or twenty feet, alone and uncared for; nobody there puts it in pots, and watches it daily.

There the SENSITIVE PLANT grows under foot, as thick as clover in this country. 'Tis a strange plant; as soon as you *breathe* on it, it curls up as though dead, until you leave it alone, when it will soon open as fresh as ever.

The tall, majestic COCOANUT trees tower upward, their fruit hanging one hundred feet above your head.

The ORANGE tree, too, with its luscious, golden fruit, is growing at your door, together with the LEMON and the LIME.

The PINEAPPLE and BANANA plants are within your reach, and your mouth can be sweetened by the SUGAR-CANE.

You can see, with your own eyes, how COFFEE grows, and, your curiosity satisfied, turn around and spend the next hour in carving your name on the CINNAMON tree.

Here you can stray through some parts of the forest, and pick up unheard-of nuts in countless numbers, but not knowing their nature you are afraid to eat them. Plenty of IVORY nuts, which you will find impossible to crack with the teeth, and plenty of beautiful flowers, most of which are poison; all these things greet your eyes at every step.

And then the animals, not many varieties 'tis true, but all strangers to us, and therefore interesting.

First of all comes that amphibious animal, the CROCODILE, with a phiz frightful enough to frighten a person. Shall I tell you how this ungainly animal get his meals? or, at least, how the natives say he does? Well, then, he goes into the forest and eats some very sweet herb, and then comes out and sits on the river bank with his mouth wide open; various kinds of flies and bugs then *enter* to eat this masticated sweet-stuff, and when Mr. Crocodile has his mouth full, bang go his jaws together, and the insects are prisoners. He then plunges into the river, opens his mouth, spits out the bugs, and the *fish* coming after the bugs, he grabs *them*, and thus finishes his meal. Cute, isn't it?

Then there are the alligator's offspring, the LIZARDS, running around loose. There are thousands of them, and they come into the house, on the bed, in the pantry, and everywhere in fact. They always take the same color as the article they are on.

Then there are the MONKEYS, who never come into town, (except as prisoners,) but stay on the other side of the lagoon, grinning and chatting all day long, sometimes resting on the tops of trees, and at other times swinging on the vines that hang from the ancient veterans of the forest.

The PARROTS fly over the little city in large flocks, like crows over in Jersey.

The wonderful COCHINEAL INSECT is here seen alive. This insect is taken in large quantities, dried and sent over the world to be used as a dye, and most of the readers of this little article have eaten eggs, on Easter, dyed a beautiful color by these little insects.

Along the rivers can be seen large numbers of the WHITE STORK, which fly away at the approach of man.

But the greatest sight of all is the Central American ANT family, who build houses three and 4 feet high, and make a path, (looking like a cow path,) 18 inches wide.

In the forests the WILD BOARS attack their prey, while they, in return, are set on by the snakes, who, in turn, are attacked by their enemies, and thus it goes, day after day; one family of animals is constantly eating another family up.

Now, after having seen all this, come with me to yonder ORANGE tree, where I hang my hammock, and always enjoy a "siesta" before supper. There, lay your "toga" and "sombrero" on the ground, and, as the cool zephyrs sway your hammock gently to and fro, you can shut your eyes, and think of the glory of God and the beauties of nature.

A COWARDLY fellow having kicked a newsboy the other day for pestering him to buy an evening paper, the lad waited till another boy accosted the "gentlemen," and then shouted in hearing of all the bystanders: "It's no use to try him, Jim; he can't read."

Remedies and Receipts.

Cream Cake.—Two eggs; one cup of sugar; one cup of sour cream; three cups of flour; one teaspoonful of soda; one of salt.

Peach Trees.—Plant tansy around the roots of peach trees. The peach worm will not trouble them afterward.

To Destroy Insects on Trees, Shrubs, &c.—Tie up some flour of sulphur in a piece of gauze, and dust the plants with it.

To Preserve Grain from Vermin.—Sprinkle garlic about the place it is stored in, or paint the wood-work with coal tar.

To Prevent Teakettles Coating with Lime.—Put the shell of an oyster in the teakettle, and the lime will adhere to it instead of coating the sides.

Bordentown Cup Cake.—Four cups of flour, two and a half of sugar, one cup of butter, one cup of milk, three eggs, a teaspoonful of cream of tartar, half teaspoonful of soda.

White Face Cake.—The whites of three eggs; one cup of white sugar; half cup of butter; half cup of sweet milk; one teaspoonful of cream tartar; half one of soda. Flavor with lemon.

Earache.—Put into the ear a clove of garlic, or a small toasted fig, and bathe the feet in warm water at bed-time, taking care to stop the ears with undressed wool, and to keep the head very warm at night.

To Remove Ink Spots from Linen.—Take a mould candle, or some pure tallow; melt it, and dip the spotted part of linen in the melted tallow; then put it in the wash, when it will become perfectly white.

To Extract Paint from Cotton, Silk or Woolen Goods.—Saturate the spots with spirits of turpentine, and let it remain several hours; then rub it between the hands. It will crumble away without injuring either the color or the texture of the article.

To Make Hens Lay Perpetually.—Give your hens half an ounce of fresh meat, chopped fine, once a day, while the ground is frozen, and they cannot get worms or insects; allow no males to run with them, and they will lay perpetually. Try it. They also require plenty of grain, water, gravel and lime.

Lemon-Juice in Diphtheria.—Dr. Revillout, in a paper presented last summer to the French Academy of Medicine, asserts that lemon-juice is one of the most efficacious medicines that can be applied in diphtheria; and he relates that, when he was a dresser in the hospital, his own life was saved by this timely application. He got three dozen lemons, and gargled his throat with the juice, swallowing a little at a time, in order to act on the more deep-seated parts. Dr. R. has noted eleven cases of complete success obtained by this method of treatment.

Antiquity of the wheel-barrow.—M. de Luc corrects an error that has prevailed in France, with regard to the invention of this useful little vehicle. It has been attributed to M. Dupire, who, it has been claimed, devised it in 1669. M. de Luc says he has found mention of them in the thirteenth, fourteenth and fifteenth century MSS., and gives an illustration taken from a vignette of a manuscript of the thirteenth century, of a man propelling a wheel-barrow, the form of which differs but slightly from those now in use.—*Scientific American.*

Scraps of Humor.

THE greatest bet ever made—the alphabet.

A WRIT of attachment—a marriage certificate.

THE New York *Sun* thinks "one of woman's best gifts to man is a clean shirt."

WHY are the girls in Missouri always sweet? Because they are Mo. lasses.

A FRENCH paper tells a happy thought for two lovers in New Jersey, that their blood may be commingled in the same mosquito.

"Do you call this a trunk?" growled a dejected porter. "It only needs a lightning-rod to be mistaken for a boarding house."

THEODORE TILTON has promised Ida Lewis that she shall become Secretary of the Navy when he becomes President.—*Boston Journal.*

"WHERE are you going to?" asked one little boy of another, who had slipped and fallen down. "Going to get up," was the blunt reply.

WHILE a mother was brooding over her poverty, her little son said, "Mamma, I think God hears when we scrape the bottom of the barrel!"

SOME mischievous wags one night pulled down a turner's sign and put it over a lawyer's door. In the morning it read: "All sorts of turning and twisting done here."

A YOUNG gentleman, speaking of a young beauty's fashionable yellow hair, called it pure gold. "It ought to be," quoth an old bachelor, "It looks like twenty-four carrots."

SOME one says there are no daily papers published in his town, but there is a ladies' sewing meeting, which answers the very same purpose.

A BOSTON paper is "in favor of women voting if they want to." A Western paper "would like to see the man who could make them vote if they didn't want to."

AN old writer thus accounts for the apostles being just twelve in number: "The gospel was to be preached in the four corners of the world, in the name of the Trinity; and three times four makes twelve!"

A BLUFF old farmer says: "If a man professes to serve the Lord, I like to see him do it when he measures onions, as well as when he hollars glory halleluyar." This remark will apply to more transactions than measuring onions.

"Is your father at home?" inquired the man of the little girl who admitted him.

"Is your name Bill?"

"Some people call me so," he replied.

"Then he is not at home, I heard him tell John that if any bill came in to say he is not at home."

AN old lady on a steamboat observed two men pumping up water to wash the deck, and the captain being near, she accosted him as follows: "Well, Captain, got a well aboard, eh?" "Yes, ma'am, always carry one," said the polite captain. "Well, that's clever. I always dislike this nasty river water, especially in dog days."

AN old lady, recently, in a court before which she was brought as a witness, when asked to take off her bonnet, obstinately refused to do so, saying, "There is no law to compel a woman to take off her bonnet." "Oh!" impudently replied one of the judges, "you know the law, do you; perhaps you would like to come up and sit here, and teach us?" "No, I thank you, sir," said the woman tartly, "there are old women enough there now."

THE miners of Nevada designate the members of a Chicago commercial party now visiting there as "them fellers that have to grease their legs to get their breeches on."

TOM HOOD wrote to his butcher that it was necessary for the sake of cheap literature, and the interest of the reading public, that he should furnish him with meat at a very trifling percentage above cost price. Mr. Stokes replied: "Sir, respectin' your note cheap literater *be blowed.* Butchers must live as well as other pepel—and if so be you or the redin' publick wants to have meat at cost price, you must buy your own beastesses and kill yourselves. I remain, &c."

"REVENGE," says the proverb, "is sweet." Different men have different ways of showing it. My friend Brown's way is harmless and humerous. Two Jonesses live next door to each other, and having to call on one of them, Brown, of course, went to the wrong house. A crabbed servant answered the bell, and on Brown's asking, "Is this Mr. *John* Jones'?" she replied, snappishly, as if she had been bothered with many such inquiries, "No, it *a'n't,*" and slammed the door in his face. Brown walked on a hundred yards or so, when a bright thought struck him. He returned at once, and rang the same bell again. Again the crabbed servant appeared. "Who said it was?" asked Brown, triumphantly, and instantly walked away.

A DARKEY suffering from a severe attack of chills was observed in one of the streets of Louisville. His teeth were chattering like a reaper under full headway. He was eating a watermelon on the curbstone, and some one told him that eating it would give him the chills. He looked up, with his mouth half full, and a slice in each hand, and shivered out: "Dis is de way I tuck de chills, eatin' dese things. I got de chills on me now, boss, and I likes watermelons better'n I duz de chills, kase dare am't no danger ob makin' me shake wus'n I duz. I'll eat dis'n if I dies 'fore I git to de rines."

A NAUGHTY little boy, blubbering because his mother would not let him go down to the river on the Sabbath, upon being admonished said: "I didn't want to go a swimmin' with 'em, ma, I only wanted to go down an' see the bad little boys drown for going a swimmin' on a Sunday —boo-hoo."

REGENERATION.—A boy at a Presbyterian examination was asked, "What is the meaning of regeneration?" "Oh, to be born again," he replied. "Quite right, Tommy; you're a very good boy. Would you not like to be born again?" Tommy gave no reply, but on being pressed for an answer, at last said, "No." "Why, Tommy?" "For fear I might be born a girl."

MOVING HOUSES has been reduced to a perfect system in Boston, where, at present, they are moving a large free-stone hotel to make room for the widening of Tremont street. A sort of railroad has been constructed for it. The entire basement has been laid bare, the foundations slightly raised, and large numbers of small iron rollers inserted under them, and these rollers will move upon a stout foundation wall with straps of iron bound to its top. The moving force is some sixty or seventy jack screws, turned by human power, and capable of moving 1,000,000 tons, which is the weight of the building. The journey was commenced on the morning of August 21st, and at noon the edifice had been moved 19 inches. In the meantime the occupants of the building are employed in their usual avocations.

Selections.

TRADES UNIONS.

Nothing concerning the condition of the industrial classes during the past thirty years is more noteworthy than the rapid development of the trades union system, and the colossal proportion that it has now attained. Although not as extensive in this country as in England, or perhaps in France, trades unions are organized in this country to a much more formidable extent than is commonly supposed; and the manner in which they are managed has already a most important bearing upon almost every handicraft. Should co-operation ever be adopted on a large scale by American operatives, it will doubtless be as an offshoot of the trades union system; and a few statistics of the strength and scope of the latter in this country may not be without interest to our readers. The figures are taken from an elaborate article recently published in the N. Y. *Evening Post.*

In the building arts the bricklayers lead off with a National Union, embracing 70 branches and between fifteen and twenty thousand members, whose wages at the present time range from four dollars and a half to five dollars a day. After these come the carpenters and joiners, with an organization of six thousand members, divided among seventy-seven subordinate societies, earning from three to four dollars per diem. It would seem that only a small proportion of the men in the trade belong to the unions, inasmuch as their whole number is set down at thirty thousand. The operative masons have no national organization, but the several associations in New York City, Brooklyn, Paterson, and other manufacturing places in New York and New Jersey, have an aggregate of about two thousand members. They are paid five dollars for ten hours' work. The Plasterers' National Union has eighteen branches and twenty-five hundred mem. Of these upward of a thousand belong to the New York branch, Albany has four hundred, Brooklyn the same, and Philadelphia a membership one-fourth greater. Wages, from four dollars and fifty cents to five dollars. The operative painters have a Union in New York City, with some nine hundred members, who receive four dollars and a half for ten hours. In addition to these are the 'longshore painters and the coach-painters, together about two hundred and seventy.

Of workers in metal, the iron molders have the most efficient organization of the kind in the country. It is styled the "International Union of Iron Molders," and includes both Canada and the United States in its jurisdiction. It has upward of two hundred branch unions, and a membership of seventeen thousand, of whom one thousand five hundred belong in New York City. Wages per day of ten hours average three dollars and a half. The Machinists' and Blacksmiths' National Union has upward of a hundred subordinate societies, and ten thousand members—seven hundred of these are in New York City, and their earnings are about the same as those of the molders. There is also the "Grand Forge of the United States," with forty-eight branches and fifteen hundred members, mostly iron founders and resident in Pennsylvania. In the Brass Founders' and Finishers' Union there are only about two hundred members; of gas and steam-fitters hardly more than one hundred; and of the brass molders about the same. These all average about twenty-one dollars per week. There are, perhaps, seventy-five metal-roofers, and three hundred and fifty tin-roofers, whose wages run from eighteen to twenty-four dollars per week. The engineers' associations throughout the country have upward of six hundred members. Their average remuneration is somewhat less than three dollars per day.

It would occupy more space than we can well devote to the subject to mention in detail all the various trades organized in trades unions. The Knights of St. Crispin, composed of workmen in the shoe trade, appear to be far ahead of the other societies in point of numbers, having a membership of fifty thousand. The average pay in this trade is about seventeen dollars a week. The stone-cutters have some four thousand members, paid twenty dollars per week. The Tailors' National Union has thirty-five branches and two thousand members, whose wages are stated at figures astonishingly low, only from nine to ten dollars per week for sixteen hours' work per day. The Dry Goods Clerks' Society has seven hundred members, who receive from fifteen to eighteen dollars a week, or about the same as the hod-carriers—of whom there are some two thousand five hundred in New York City alone.

As nearly as can be ascertained, the national unions in the country embrace together about one thousand branch or subordinate unions, and not less than one hundred and twenty-four thousand members. Of the former, about one hundred are in New York City, with an aggregate membership of seventy thousand.—*American Artizan.*

* * *

MEDICAL HINTS.

1. If a man faints, place him flat on his back and let him alone.

2. If any poison is swallowed, drink instantly half a glass of cool water, with a heaping teaspoonful each of common salt and ground mustard stirred into it; this vomits as soon as it reaches the stomach; but for fear some of the poison might remain, swallow the whites of one or two raw eggs, or drink a cup of strong coffee, these two being antidotes for a greater number of poisons than any dozen other articles known, with the advantage of their being always at hand, if not, a pint of sweet oil, or lamp oil, or "drippings," or melted butter or lard, are good substitutes, especially if they vomit quickly.

3. The best thing to stop the bleeding of a moderate cut instantly, is to cover it well with cobweb, flour and salt, half and half.

4. If the blood comes from a wound by jets or spurts, be spry, or the man may die in a few minutes, because the artery is severed; tie a handkerchief closely around near the part between the wound and the heart; put a stick between the handkerchief and the skin, and twist it around until the blood ceases to flow; keep it there until the doctor comes; if in a position where the handkerchief cannot be used, press the thumb on a spot near the wound, between the wound and the heart; increase the pressure until the bleeding ceases, but do not lessen the pressure for an instant before the physician arrives, so as to glue up the wound by coagulation or cooling of the hardening blood.

5. If your clothing takes fire, slide the hands down the dress, keeping them as close to the body as possible, at the same time sinking to the floor by bending the knees; this has a smothering effect upon the flames; if not extinguished or great headway gotten, lie down on the floor and roll over; or better, envelope yourself in a carpet, rug, bedcloth, or any garment you can get hold of, always preferring woolen.

6. If the body is tired, rest; if the brain is tired, sleep.

7. If the bowels are loose, lay down in a warm bed, remain there, and eat nothing until well.

8. If the action of the bowels does not occur at the usual hour, eat not an atom until they do act, at least for thirty-six hours; meanwhile drink largely of cold water or hot teas, and exercise in the open air to the extent of a gentle perspiration, and keep this up until things are righted; this suggestion, if practiced, would save myriads of lives every year, both in the city and country.

9. The three best medicines in the world are warmth, abstinence and repose.—*Hall's Journal of Health.*

* * *

CARRIAGE-MAKERS' BASE BALL MATCH.—On Saturday afternoon a very exciting game of base ball took place on the grounds of the Wawaset Club between the employees of Messrs. J. Green and C. Horn. This is the second match between the carriage factories of the above gentlemen. On each occasion the employees of Mr. Green have borne off the palm of victory. The game was very closely contested, as can be seen by reference to the score, both parties playing in a style which astonished the spectators, who little expected such excellence among amateurs. Where everybody acquitted himself so well, it would be useless to signal out any one for particular notice. We here append the score:

Innings—	1	2	3	4	5	6	7	8	
Horn's nine,	1	4	10	6	1	5	2	10	—39.
Green's nine,	1	3	6	6	10	3	11	5	—45.

Umpire—Mr. James, Wawaset B. B. C.
Scorer—T. Plunket.—*Del. Tribune.*

Miscellaneous.

A YOUNG lady has made application for the appointment of postmaster at Cincinnati.

THE landings along the Missouri river are all crowded with wheat, awaiting shipment.

COMMODORE VANDERBILT paid $500 to the clergyman who recently tied the knot for him.

SOME snob is driving a team at New Brighton, with white leather harness and gold buckles.

A PAIR of horses were sold in Lynchburg, Va., the other day, at the rate of twenty-two and a half cents per pound.

SEVENTY women, two years ago, emigrated from Massachusetts to Oregon. Sixty-nine are now married.

A FIRM faith is the best divinity; a good life is the best philosophy; a clean conscience the best law; honesty the best policy.

A BLAZING fire should be kept in every family-room until ten in the morning, and rekindled again an hour before sundown, up to the first day of October.

WATER runs over Niagara Falls at the rate of 1,500,000,000,000 cubic feet every minute, giving a water power of force enough to perform all the manual labor in New York State.

RICHES oftentimes, if nobody take them away, make to themselves wings and fly away; and truly many a time the undue sparing of them is but letting their wings grow, which makes them ready to fly away; and the contributing a part of them to do good only clips their wings a little, and makes them stay the longer with their owner.

SOME English capitalists are about to dispatch workmen to New Zealand to commence the business of preserving mutton. The meat is to be put up in tin cans of various sizes. Meat has thus been successfully and profitably shipped from Australia to England, and there is no good reason why it may not be transported any distance in this manner.

DUTIES seem great or small according to the spirit and way in which they are performed. A mean, ignoble mind tosses off with a sneer a deed which a magnanimous soul would perform so sweetly and so nobly as to charm whoever saw it done, and leave the recollection of it as a precious possession for ever. A cold, selfish nature gives a guinea in a spirit so petty, and a way so cruel, that its value shrinks to a farthing, while a generous one gives a farthing so that it is felt to be worth a guinea.

A PROCESS for embalming or petrifying the human body, which is far more perfect than anything heretofore known, is said to have been discovered by an Italian professor, and a body is shown that has been preserved for five months. The features, the integrity of form, are as perfectly preserved as they were at the moment of death. The nails have a roseate hue; there is no odor of any kind, the flesh has the hardness, almost of marble; and the hair adheres so tenaciously to the head that it is impossible to remove it without violence. The operation of embalming or petrifying is effected in a few hours, without the necessity of removing any portion of the dress, even to the gloves.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

WANTED—A purchaser for stock and fixtures of a Carriage Factory in Jersey. Good location. Address this office.

WANTED—A First-class Body-maker and Draftsman—a *live man*—capable of doing all kinds of work in a large factory, and willing to go West. The best of reference will be required. To a hand that will suit, a good permanent situation will be given. Address this office.

WANTED—A First-class Carriage Trimmer, to go West. To such a trimmer *only* we will give a permanent situation. Will correspond with any such to this end.

QUINBY & HALLOWELL,
Carriage-Makers, St. Paul, Minn.

WANTED—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

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O. W. Swift, New Haven, Conn.
New Haven Steam Saw Mill Company, New Haven, Conn.
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C. S. Bugbee, Batavia, Ill.
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Persons desiring to act as Agents for the JOURNAL, will be required to satisfy us of their responsibility and integrity. Those published as Agents are authorized to receipt for subscriptions so long as their names are continued on this list.

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Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, September 10, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.
Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 40 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.
Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50
Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.
Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.
Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.
Basket-wood imitation, for panels, per foot 60c.
Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.
Bolts, Phila., 40 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.
Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.
Buckram, per yard, 16 to 20c.
Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.
Castings, mall, per lb., 13c.
Cord, seaming, per lb., 25c.
Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
" body, per yard, indigo wool-dyed, $3.75 to $4.50.
Coteline, per yard, $4 to $8.
Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.
Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30; English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.
Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.
Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.
Drugget, felt, per yard, $1.35 to $2.
Enameled cloth, per yard, muslin, 5-4, 33c.; 6-4, 45c.; drilling, 5-4, 46c.; 48 inch, 48c.; 6-4; 62c.; duck, 5-4, 63c.; 50 inch, 68c.; 6-4, 75c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 60c.; 48 inch, 62c.; flock drill, 48 inch, 95c.; do., muslin, 85c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.
Felloe plates, wrought, per lb., 15c.
Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.58; New York pat., ⅝, $1.12; ¾, $1.20.
Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.
Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.
Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.
Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.
Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.
Lamps, per pair, fine, $15 to $20.
Leather, per foot, dash, No. 1, 14c.: do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 26c. to 28c.; do., No. 2, 24c.; enam. trimming, 24c.
Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.
Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.
Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.
Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.
Moss, per lb., 10c. to 15c.
Name plates, per do., en., German silver, $4 to $4.50.
Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
" Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $2.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.
Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2 15; 1⅛, $2.50; 1¼, 2.65.
" close plated on brass, ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
" ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.
Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $12
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.
Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.
" Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 23c.; 1½, 3, 4 and 5 plates, not shorter than 33 inch, 22c.; shorter than 33 inch, per lb. extra, 3c.
" Bright oil-tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.
" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.
Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.
Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.
Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.
Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.
Top holders, Thomas patent, buggy, $5 each; extension, $7 each.
Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.25; Thomas' wrought with plated nuts and rivets, $1.35.
Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.
Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.
Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.
Turned collars, per doz., 10 per cent. discount from list, ¼, 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,
Tufts, per gross, common worsted, 18c.
Twine, tufting, per lb., No. 16, 50c.; best mattress, 85c.
Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.
Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.
Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.
Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.
Whip socket fasteners, $3.00 per dozen pairs.
Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.
Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.
Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash and red oak, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.
Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2.25 per set.
Poles, hickory, per dozen, rough, $12; finished, $16.
Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.
Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.
Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
" " double " $4.50 "
Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.
Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.
Seat arms, per dozen pairs, $1.25.
Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.
Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.
Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.40; deep, $1.30; Ger. gotn. pale, $1.40; deep, $1.30; Chinese, $1.30; Trieste, $1.25; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 14½c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 14c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c.; 00. 75c.; 000, 85c.; 0000, 95c.
Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.
Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.
Best Paint Mills—Large, $8; small, $6.50.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, for balance of present volume (11 months) for one dollar each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

*HARPER, HENRY, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winsted, Conn.

Brush Manufacturers.

*THUM, CHARLES D., 150 North Third street, Phila.

Carriage Body Manufacturers.

NORCROSS, H. S., (light,) 1712 Coates street, Phila., Pa.

Carriage Bolt Manufacturers.

HAYDON, A. & M., 22d street, above Vine, Phila., Pa.
*SCOTT & DAY, 38 North Third street, Phila., Pa.
SHIELDS, WM., 23d street, above Race, Phila., Pa.
*SKELLEY, T., 24th st., below Callowhill, Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.

Carriage Castings.

*FITZGERALD & FLAGG, 218 N. Third st., Phila., Pa.

Carriage Wheels.

BROWN, S. N. & CO., Dayton, O.

Coach Hardware and Trimmings.

*ATWATER, H., 1625 Market st., Phila.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
KEIM, GEO. DEB., 162 North Third street, Phila., Pa.
KENNEDY & CO., 305 Arch street, Phila., Pa.
*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*ROUSE, J. G. & CO., 4th & Arch sts., Phila.
*SCOTT & DAY, 38 North Third street, Phila.
SNYDER, W. & A. J., 115 North Third st., Phila.

Carriage Draftsmen.

*MULLER, A., 142 Second street, New York City.

Coachmakers' Tools.

WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

Coach Lamps.

*CAREY & POST, 234 Carter st., Phila., Pa.
*NIXON & WIGLEY, 39 North Seventh street, Phila.

Felloe, Spoke and Shaft Manufacturers.

*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*SCOTT & DAY, 38 North Third street, Phila.

Iron Merchants.

*ATWATER, H., 1625 Market st., Phila.

Ivory and Horn Turners.

*ATWATER, H., Agent, 1625 Market st., Phila.
HACKERT & CO., 99, 101 and 103 E. Houston st., N. Y.

Paint and Varnish Brushes.

*FELTON, RAU & SIBLEY, 136 North 4th st., Phila.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*THUM, CHAS. D., 150 North Third street, Phila.

Permanent Wood Filling.

*VALENTINE & CO., Boston, Mass.

Rubber Enameled Carriage Cloth.

*ODORLESS RUBBER CO., 19 Park place, N. Y. City.

Paints, Oils and Varnish.

*FELTON, RAU & SIBLEY, 136 N. 4th street, Phila.
LUCAS, JOHN & CO., 141 North Fourth street, Phila.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., Phila

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

*CROWELL, DAVID, Wood Works, Rahway, N. J.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Spring Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.

Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

*ATKINSON, W. & CO., 1270 Broadway, New York.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

*FELTON, RAU & SIBLEY, 136 N. Fourth st., Phila.
KEYSTONE VAR. & JAP. WORKS, 313 Race st., Phila.
*MINETT & CO., 60 Pearl st., N. Y., & 7 S. 10th st., Phila.
PARKER & GILLESPIE, 228 Pearl st., New York City.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*SMITH, EDWARD & CO., 161 William street, N. Y.
*VALENTINE & CO., Boston, Mass.

AYRES, LIPPINCOTT & CO.,
WHOLESALE DEALERS IN
CARRIAGE MATERIALS AND SADDLERY HARDWARE,
No. 49 NORTH THIRD STREET,
PHILADELPHIA.

We invite the attention of Manufacturers and Dealers to our complete stock of goods in the Carriage line, which we propose to sell at the lowest market rates.

Our facilities in the purchase of goods, in large lines, often enables us to supply them below Dealers and Manufacturers **PUBLISHED** prices.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 2. NOVEMBER, 1869. $3.00 PER ANNUM Always in Advance.

THE SEASON FOR IMPROVEMENT.

The long winter evenings are just ahead of us, presenting a season for improvement unequaled during any other part of the year, and we should ask ourselves the question, how shall we spend our leisure to the best advantage? If no well defined plan be laid down for our guidance in a course which will be profitable, the time will slip away and be wasted. The apprentice should take up some study bearing specially on his branch of the trade, and pursue it with the determination to overcome whatever may be imperfectly understood.

If you reply that you are at a loss to know what studies will be most beneficial, and that you have not the means to purchase the books you require, or that you can do nothing without a teacher, we answer, if there is a library or mechanics' institute in your town or city, your parents, guardian, or employer, will be proud to stand responsible for the books you take out; and should the pittance that is required to secure you these advantages come out of your own savings, it will be the best investment you can make. Take up a course of reading, writing, arithmetic, and free-hand drawing, or the first lessons in geometry. This last study would be of incalculable benefit to either the wood-worker, blacksmith, painter, or trimmer. If you cannot enter a night class, then study at home.

Set apart at least three evenings each week, and allow no thoughtless companion to intrude on your privacy. Do not attempt too much, thus skimming over a great deal, retaining nothing that you can apply to good advantage. Procure paper or a blank book, and copy your lessons. This will be found the best mode of assisting the memory. Never pass a word without fully understanding its meaning.

Commence your studies early in the evening to avoid sitting up late, thus depriving yourself of the proper amount of rest. Three hours of close application will be sufficient, and if you choose to rise early, a review of the previous night's work will be found an easy task. You will perceive that we have not advised all work and study, and no play or recreation, but we allow three evenings for amusement, which, by the way, should be of an innocent character. We believe that natural tastes and inclinations should be gratified in so far as they do not impair the health, and lead to immorality.

A young man who has a taste for music should not be ridiculed by the parents or guardian who may lack this gift, but rather be encouraged, for the study of music has a refining influence. Drawing should also be encouraged, and so with any other natural bent of the mind.

Our advice, then, to the apprentice and young men who are free is, that they devote a reasonable amount of their leisure to reading those books and pursuing such studies as shall better prepare them to become skilled artisans.

In the large cities and towns there will be no lack of amusements, some of which will have no evil tendency, while others if indulged in will lead to ruinous habits, and unless a proper course of conduct be decided upon and steadfastly maintained, there is danger of being carried away by the blating of horns and the whine of the violin to the neglect of more important matters, or it may be found when spring opens that we have read more hand-bills and huge posters than good books, and that we can speak more fluently of jig-dancers and sensational blondes or brunettes, than of those who have given readings or delivered lectures on subjects of lasting value.

What a beautiful field of labor lies before the carriage maker! Each branch is entirely distinct and presents ample scope for the display of skill. The wood-worker, if his soul is fired by a proper zeal, may spend a lifetime in designing and producing forms which will be admired, and at last pass from the stage of action, having failed to exhaust the lines and angles which may be applied.

The smith, in his attempts to search out the nature of the material he works, new forms of springs and their attachment, improved axles, manner of hanging off work, and beauties of form combined with lightness and strength, need not be idle.

The painter and trimmer, also, have each a field of operation, wherein they may be ever at work seeking novelties, and giving from time to time combinations that will be pleasing and profitable.

The beauties that lie hidden will not be disclosed to those who do not search for them, for it is only by well-directed and continuous effort that much can be accomplished in any calling.

We have but to glance at the varied and beautiful forms now presented in almost every shop throughout the country, and compare with those of a few years past, to perceive what advances have been made. There is still room for improvement. The apprentice of to-day has marked advantages, and should not idle away his time on frivolities. Journeymen should be alive in their respective callings, and not rest satisfied short of perfection.

American carriage builders bear a world-wide reputation for work combining comfort, beauty of design, lightness and perfection of finish, and no cities in the world can uncover to the gaze of the customer more magnificent and stately vehicles than may be found at New York, New Haven, Philadelphia, Boston, Cincinnati, and other cities.

But a higher degree of excellence is attainable and will certainly be reached if we improve our leisure time.

CO-OPERATION IN NEW YORK CITY.

The subject of co-operation has been agitated more or less for several years, and has been tested in England sufficiently to prove that employers and employees are greatly benefited by this union of interests.

In this country there has been a good deal written, many able addresses delivered, and a few attempts made to unite the capital of workingmen for the purpose of obtaining cheap groceries and provisions, but so far there has been no grand movement among carriage-makers which promised anything lucrative and perpetual.

It remained for the leading manufactory of the United States, Messrs. Brewster & Co., of Broome Street, New York, to inaugurate a system whereby the employees are to share the profits of the business in a manner which will no doubt prove satisfactory to all concerned. There are about two hundred and fifty men employed in Brewster & Co.'s factory, classed as follows: Body-makers, wheel and carriage-part makers, blacksmiths, painters and trimmers. Now they propose to organize this force after the following

PLAN.

Each department shall elect three of its members to form a Board of Control, one of whom shall be its chairman. The chairmen of the several Boards of Control, together with one member of the firm, shall constitute the Board of Managers, who shall have the supreme direction of the entire business of the firm, and to whom all appeals from the decisions of the local Boards of Control may be taken. A member of the firm must, however, be President of the Board of Managers. He shall exercise the usual veto power, but his veto may be overridden by a two-thirds vote of the Board of Managers.

The general duties of the several Boards of Control shall be to look carefully after the mutual interests of the firm and themselves, to prevent waste of time and material, in short, to see that every man does his whole duty. Each local board will decide on the quality and capabilities of the workmen, and can recommend the dismissal of the incompetent, or of those who persist in being careless in regard to their own interests, manifested by waste of time or stock.

The plan will not do away with the foremen of the different departments, nor will it be allowed to disorganize the present management of the business of the firm.

PROFITS.

The profits of the entire year's manufacture, not only upon sales, but upon everything by which profit has been made by the use of capital, will be divided at the end of the year among the workmen, except a proportionate share reserved for the use of the capital invested.

No officer or member of the firm shall receive any salary for his services in the association; and it is further proposed, that if any man be discharged before the end of the fiscal year he shall receive his proportion of the profits on all of his earnings, provided he has earned $100, but if he leaves voluntarily, the sum due him will go into a Common Benefit Fund, from which medical aid will be provided for the sick and to defray funeral expenses in cases of death.

The firm have very generously donated $1000 of the profits of the *present* year as the nucleus of this fund.

We have thus given to our readers the main outlines of a plan for the settlement of matters of grievance which occur in almost every branch of mechanical pursuit, that is, the action of Messrs. Brewster & Co. has struck at the root of the vexed question of capital and labor, and so far as *they* are concerned, will doubtless reap a harvest of peace and concord among the employees apart from the increased profits which will certainly follow. Messrs. B. & Co. disclaim any credit as philanthropists, and state distinctly that they have been impelled to this course after a careful calculation, with the sole object of making money. Will they pardon us if we disagree with them slightly. We hold that such liberality is not the offspring of an avaricious mind, and although they may desire increased profits as the result, the thought or plan had its growth in good hearts, with men who have a wide reputation for their liberality toward those in their employ who were competent workmen.

Mr. James Brewster, Sr., was a man who did much toward elevating the mechanic, and his example and influence remain, though he has sunk to rest. We understand that great credit is due Mr. Britton, a member of the firm, for *his* skillful management and wise suggestions. May success attend the movement, and the example be copied by other builders throughout the States.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "French or Square Rule" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Volume IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail, $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted. Persons having either or all the following numbers of Volume III, and not wishing to preserve them, can have them exchanged for any numbers they may desire in either Volumes IV or V. The numbers we desire are as follows: *November, No.* 2; *January, No.* 4; *February, No.* 5; *March, No.* 6, all of *Volume III.* We can supply full sets of Volume II at $1.25.

BESSEMER STEEL.

It is well known that the Bessemer process has given to the world a quality of steel which is unsurpassed. Its toughness admits of a great reduction in the weight of metal required at any point where tension or wear are required. On a recent visit to our neighboring cities, while in New York, among others, we called on Mr. James B. Brewster, No. 65 East Twenty-fifth street, and saw a new application of steel as a means to strengthen wood. Mr. Brewster has received letters patent for supporting and draught bar, consisting of steel plates, horizontally, vertically or otherwise inserted into spring bars, axle beds, whiffletrees, &c. The grain of the wood on bars may be reversed, and, with the steel to stiffen the pieces combined, forms a serviceable yet very light bar. Axle beds are reinforced by having the steel inserted vertically in a cavity made for its reception; yet, unlike the whiffletree, the axle bed is not made in two pieces. This prevents all spring in the axle.

A wagon built on this plan may be lightened with safety to a comparatively few number of pounds weight, say one hundred and thirty pounds, yet capable of supporting two heavy men. Top buggies can be reduced to two hundred pounds or less. Mr. Bonner, of the New York *Ledger*, is using one of these top wagons, and in his late trial of speed over Prospect Park made a mile in 2.21½.

We were gratified to learn that Mr. Brewster has had an excellent run of trade, and that one hundred and fifty men have been kept busy in order to supply the demand for his work. Using Bessemer steel alone in axles and tires, and giving careful attention to the *minutiæ* about a carriage, has given to this firm an enviable reputation. Carriage-makers desiring any information on the practical results in the use of this steel, and where it can be obtained on the best terms, can apply to Mr. Brewster, of Twenty-fifth street, who will be most happy to enlighten them.

NOTES BY THE WAY.

Wilmington, Del.—This city is fast becoming one of the most extensive carriage manufacturing places in the country, and even now, considering its population, is in advance of all others. The factories are probably not so numerous, but are large and well adapted for the business. Among the principal ones we would mention McLear & Kendall, Cooling & Lloyd, Gregg & Bowe, Thompson & Paschal, Robinson & Bro., C. Horn, John Green, Jones Guthrie, Wm. H. Wright, and Frist and Allman. Without exception, they are the most sociable and gentlemanly set of men it has been our good fortune to become acquainted with in our travels over the country. Their employees are, in the general, men of the same stamp. Business through the summer and fall has been good, with a fair prospect of running full through the winter.

There are very few of what might be termed heavy carriages built here, their attention being principally turned to buggies, one and two-seated rockaways and business wagons, with a sprinkling of sleighs. The home market is not considered of much importance, the principal part of the work being shipped West; latterly, a considerable South and to California. The style of work is good and fully up to the times, and in quality, with some exceptions, made in the best manner, though not finished as expensively as some in Philadelphia, New York and Boston.

Garrett, Kent & Co., seem to be monopolizing the iron, hardware and carriage furnishing business. They run a full stock in each department, and do an extensive trade in the South and West. Mr. Kent, the senior member of the firm, we found to be a thorough business man, and calculated to favorably impress all with whom he may have dealings. Carswell & Vandenbraak's axle works are also located here. Our time being limited, we failed to call. Having previously visited them, we know them to be on a par with other Wilmingtonians, courteous and gentlemanly; and, as regards their axles, very few carriage-makers but have tried them for themselves, and know them to be all that is desired.

In Newark, N. J., we found business comparatively quiet, though running off considerable work. The Journal having a good circulation here, we were cordially received, and made to feel quite at home among the craft. The principal manufacturers are Quinby & Co., Leverich & Enders, Golder & Post, S. R. Southard, J. Collyer & Co., Green & Co., and E. Marsh. There are also quite a number of small shops beside, that run but few hands.

Our stay in New York city was short, during which time we visited some of the leading manufacturers, such as Brewster & Co., Corbitt & Scharch, and James B. Brewster's. Purposing to visit the other establishments soon, we hurried on to New Haven. Calling at Stamford, we made the acquaintance of the members of Phœnix Company and others, spending an hour pleasantly and, we trust, profitably.

At Bridgeport we found business only moderate, Wood Bros. & Co. and J. Mott & Co. being the only firms doing business to any great extent. The spring and axle companies located here are widely and favorably known over the country. The Journal has, in no small degree, contributed to their notoriety, sending monthly their card to thousands of carriage-makers in all sections of the United States and Canada. We visited "The Tomlinson," "The Bridgeport," "The Spring Perch," and "The Ætna" Companies, and were very much interested in the machinery and process through which a spring or axle passes before it is ready for market. The managers at each establishment are men who will command and receive the respect of those with whom they have intercourse. The readers of the Journal should remember that, in ordering springs or axles, Bridgeport has four *first class* establishments. We purposed seeing friend Mills, the coach lace man, that is so favorably known among the craft, but our stay would not admit of it. But for carriage-making New Haven takes the lead, of which we shall speak hereafter.

A GALA-DAY.

A gala-day in the form of a shooting festival of the employees of Messrs. Brewster & Co., of Broome Street and Fifth Avenue, was held at Lion Park, Eighth Avenue and 110th Street, on Saturday, October 9, 1869. We were duly apprised of it by the receipt of a card of invitation, but were unable to attend in person. Business having called us to New York a few days after the "festival," we called at Messrs. Brewster & Co.'s and learned something of the particulars of the occasion.

It appears that the firm had in mind not only a day of recreation for themselves and employees, but that they closed their factory and warerooms, and participated in the sports with a view of disclosing to their hands a project which would overflow their cup of pleasure, and make the 9th of October, 1869, a memorable day with the workmen.

The members of the firm and *attachees* of the office joined in the procession formed by the workmen, and together marched to the park, to the sound of soul-cheering music. There were one hundred and twenty-five invited guests, and, with the families of the workmen, one thousand persons were on the ground.

Names of Officers.—John D. Gribbon, Pres't; John Mosier, Vice Pres't; J. V. Reynolds, Sec'ry; John Riley, Financial Sec'ry; Thos. Sedgwick, Treas.

Committee.—J. F. Monks, C. Kurtz, S. Lyons, J. C. Dixon, J. R. Bradley, S. J. Van Tassell, A. Ferris.

The chief sport was the target practice. There were two hundred and twenty-seven persons competed for the prizes, sixty-three in number.

Dinner was served at 5 o'clock.

The first prize was a fine gold watch valued at $180, presented by the firm; they also presented one silver watch, value, $35; pair of gold sleeve-buttons, $20; bank book, (deposit,) $50; bank book, (deposit,) $35; bank book, (deposit,) $25.

Other parties presented prizes as follows:

An order for clothing,	$ 25	Ice pitcher, silver,	$ 10
Silver-plated coffee pot,		Clock,	25
Revolving butter dish,		Check,	50
Covered do do		20 dollar gold piece,	20
Castor,		Check,	25
Molasses pitcher,		do	20
½ dozen each of plated forks and spoons,		Silver pitcher,	10
		Box of wine,	15
Check for	50	Best silk hat,	6
Greenback,	10	Greenbacks,	25
do	5	Box of wine,	15
Check,	25	Gold watch,	100
Greenback,	10	Greenback,	10
do	10	Castor,	10
Ten dollar gold piece,	10	Greenback,	10
Greenback,	20	Meerschaum pipe,	50
do	5	Castor, silvered,	6
Check for	20	Package of greenbacks,	15
Ice pitcher, (silver,)	15	Ton of coal,	8
do	10	do	8
do	10	Ice pitcher, silvered,	15
Salt cellar,	5	Box of segars,	5
Rifle, with cartridges,	50	Bunch of greenbacks,	25
Gold watch,	100	do do	10
Pair of pants,	10	Greenback,	5

After dinner, when the cloth was removed, the President, Mr. John D. Gribbon, made a few happy and appropriate remarks, and then proposed the first regular toast, "The President of the United States." Loudly cheered. Next in order, "The health and prosperity of Messrs. Brewster & Co.;" responded to by Mr. J. W. Britton, of the firm. Mr. Britton expressed the pleasure experienced by himself and partners in witnessing the agreeable manner in which everything had been conducted, and finally electrified his hearers by announcing the decision of the firm in regard to an industrial partnership or co-operation, a full account of which may be found elsewhere in this number.

Great enthusiasm prevailed at this startling announcement, which found vent in loud and prolonged cheering.

The Mechanical Arts.—Responded to by Colonel Rush C. Hawkins, in a very appropriate speech, full of wise suggestions.

The Press.—Responded to by Mr. Miller, a prominent lawyer of New York.

The Ladies.—Responded to by Mr. J. V. Reynolds, assistant foreman in body room of Messrs. B. & Co. Report says he acquitted himself creditably in a chaste, witty and poetical response. His remarks were well calculated to elevate the tone and sentiment of our young men in regard to the gentler sex, and to exalt women to that sphere for which her talents befit her.

The day was heartily enjoyed by all who participated, and not until 11 P. M. were the sounds of music and dancing hushed. The company then dispersed, and sought their homes wearied by their weight of *oppression?*—no, pleasure.

GLEANINGS.

Golder and Post, of Newark, N. J., have erected a new shop three stories high with iron front. T. G. Hendry, has charge of the wood shop, and J. G. Reid the paint room. The styles of light work will not suffer under their direction. Business has been good with the firm this season. * * On our recent trip to Wilmington we found the carriage makers alive to business. Mr. Pretzschner's sale was in progress, consisting of some fifty new jobs of various kinds, second-hand work, and stock and tools throughout the establishment. A marked feature among carriage makers at Wilmington is friendly intercourse. * * The Schuylkill river, which a short time ago became so dry that it blowed away, has returned from the mountains in angry floods and destroyed a vast amount of property. * * We were favored recently by a visit from Henry C. Valentine, of the firm of Valentine & Co., Boston, Mass. He was *talking* varnish, and feels confident that he can furnish a varnish equal to the English. It is now on trial in this city, the results of which will be given to our readers hereafter. * * Vols. II and III bound in one, and Vol. IV bound very neatly, now on hand awaiting further orders. Price, Vols. II and III, $5; Vol. IV, $4; if sent by mail, postage added. The French Rule alone in Vol. IV is worth many times the price of the volume. * * A cotemporary devotes over two columns to "Apprentices to the carriage making business." It advocates the DIPLOMA system, to counteract the want of indentures which were formerly drawn up in such cases. Migratory apprentices, unskilled jours, and employers who cut down prices by building inferior work in imitation of that which is good, are each handled without gloves. * * The Hon. S. S. Fisher, U. S. Commissioner of Patents, delivered an address on the evening of the 28th of Sept., at the fair of the American Institute. The address and a portrait of the speaker may be found in the *Scientific American*, dated October 16, 1869. Purchase a copy if you desire valuable information concerning our "American system of granting letters patent." * * Glass rods placed side by side, or across each other at right angles, is the latest novelty for office windows, screens, &c. * * The applications at the Patent Office are over twenty thousand per annum. The number of patents granted this year will reach fourteen thousand. As nine failures to one success is considered a fair proportion by the Hon. Commissioner of Patents, somebody, or a great many somebodies will awake from their dream of wealth with the stern gaze of their creditors fastened upon them. * * It is claimed for sections in Tennessee, northern Georgia, and southern Alabama, that a ton of pig iron can be produced for $19, or $10.50 less than the same quality of iron can be made at Pittsburg. * * Gregg & Bowe, Wilmington, Delaware, have removed to their new factory, which is an ornament to the trade and the city in which it is located. * * There is a coach-trimmer in Brooklyn, N. Y., who has lately fallen heir to a fortune in the shape of TWO female responsibilities. Success attend him. * * Quinby & Co.'s factory, Newark, N. J., has not been affected by the portion taken by the railroad company, it being only a portion of the yard disposed of. They are doing a good business, other reports to the contrary. * * Brewster & Co.'s "Industrial Partnership" plan is all the talk among carriage-makers in New York and elsewhere. * * Newark, N. J., is sadly in need of a good hotel. * * Wood Bros., Bridgeport, Conn., have made a joint stock of their concern with a capital of four hundred thousand dollars, half the amount being taken by some of the employees. * * Leverich & Enders, Newark, N. J., have lately enlarged and improved their establishment. * * Target shooting is all the go with coach-makers in Gotham. * * Corbett & Scharch, New York City, have a whole-souled set of men working for them. * * Many persons decline taking the Journal for the reason that they "*took a work of this kind several years ago published in New York, which was of no account.*" * * The firm of Brewster & Baldwin, 25th street, New York, have dissolved partnership, and the business is continued by James B. Brewster at the old stand. * * Wells, Cruttenden & Co., New Haven, Conn., have greatly enlarged their factory, and now have one of the finest establishments in the country. * * S. M. Wier, New Haven, Conn., turns out thirty carriages per week, mostly for the South. * * The carriage factory formerly occupied by H. Pretzschner, Wilmington, Delaware, has been leased by Robinson & Bro., who purpose doing a large business.

NEW ADVERTISEMENTS.

Samuel Jackson, No. 149 High street, Newark, N. J., has patented what he terms an "oscillating wagon." The improvement consists in securing the axles to the vehicle body, or fixtures, by movable attachments placed below the axis of the wheels, which, he claims, gives a tighter draught and easier motion than has ever before been attained. The oscillation of the wheels has a tendency to ease every part of the vehicle, and relieve the horses from the jerks and strains so common to all fixed axles. For further description, see his illustrated advertisement in back of the Journal.

John A. Griswold & Co., Troy, N. Y., proprietors of the Bessemer steel works, having erected a rolling mill especially for steel, are prepared to furnish Bessemer steel bars in any quantity and at short notice, and of any shapes or sizes, from half-inch to four-inch. They would call the attention of carriage and wagon-makers to the superior quality of their steel for tire and axles, its lightness and wearing qualities rendering it especially suitable for these purposes. They manufacture five grades of steel from I (hard) to V (very soft.) These grades possess the various qualities required in the different branches of mechanics, and are stamped accordingly. Read their advertisement carefully, and favor them with your patronage.

John P. Jube & Co., 83 Bowery, N. Y., are prepared to furnish carriage-makers with everything needed, of a superior quality, and at reasonable prices. They are agents for Harland & Sons' English varnish and superior English tire steel. Their advertisement will be found in the back part of the Journal. Our patrons will find this a first class house to deal with.

OUR NEW BUSINESS CHART.

This chart is 14 by 19 inches, printed on tinted paper, containing nine fashion plates, four monograms, and has an oval centre for manufacturer's card. One of the plates is placed in the centre of the oval space, yet leaving ample room for the name and place of business. This chart is specially adapted for mailing; the cost for sending one unsealed would be only two cents.

Persons ordering may select any styles heretofore published in the Journal, not exceeding nine in number.

Price, $10 for first hundred, and $5 for each additional hundred.

☞ Sample copies sent to any address on receipt of ten cents.

OFFICE CHART.

We are also prepared to fill orders for our oval centre Office Chart. It is handsomely printed on lithograph plate paper, suitable for framing. It is 24 by 30 inches, containing 28 cuts of latest styles coaches, coupes, rockaways, buggies and sleighs, with oval centre for manufacturer's card. This chart, when framed and hung up in the office, presents a very attractive appearance; apart from its value in assisting the customer to select, or more readily make known to the builder the kind of carriage he desires built.

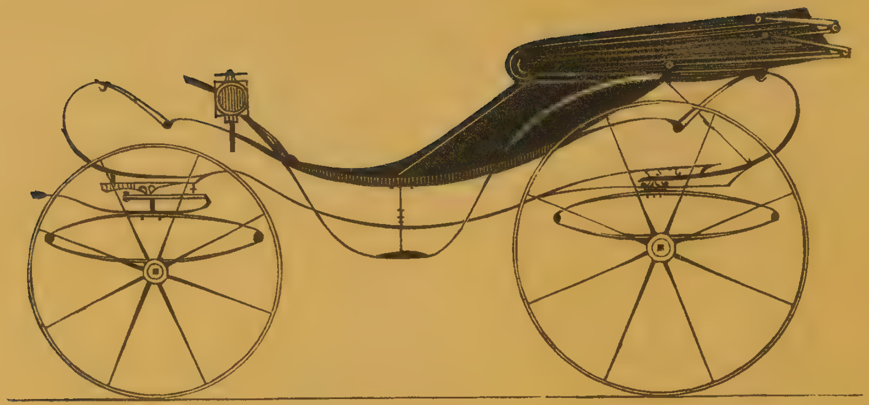
Price, $1; sent post-paid, and secured from damage by being wrapped on a roller. Name not printed in centre unless ordered, which costs $2 extra.

BUSINESS CHARTS

Of all kinds gotten up at reasonable rates.

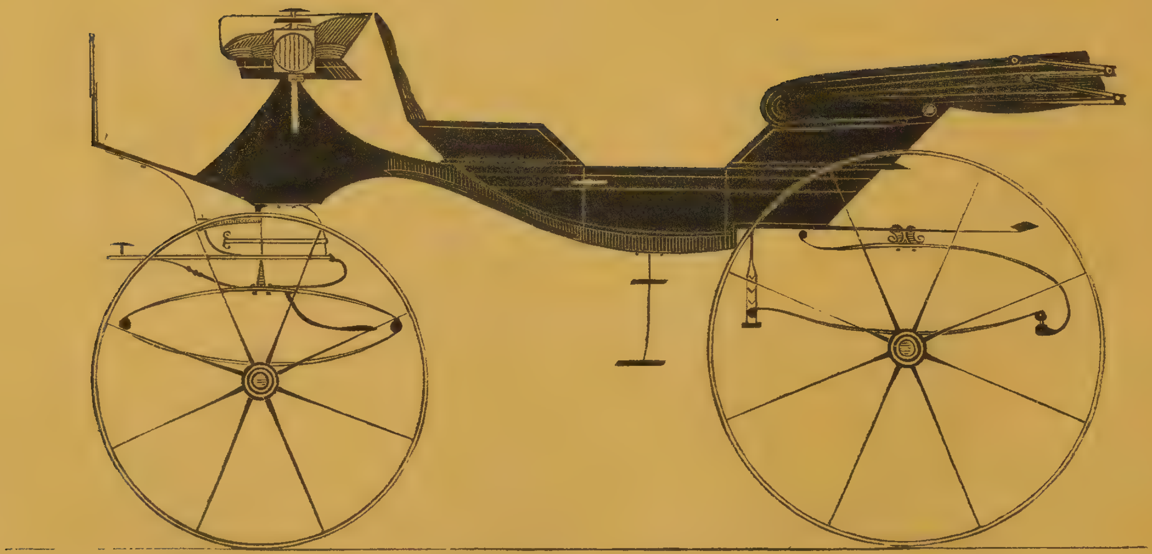
We are furnishing a very popular card, 18 by 22 inches, printed on PASTEBOARD, containing 14 cuts, with manufacturer's card printed in centre at the following rates: 25 copies, $12; 50 copies, $18; 100 copies, $30. Same chart printed on good quality of paper, 100 copies, $15, and $5 for each additional hundred.

No order received for less than 100 copies on paper. Persons can select such cuts as they may wish from those published in the Journal. Sample copy sent on receipt of ten cents.



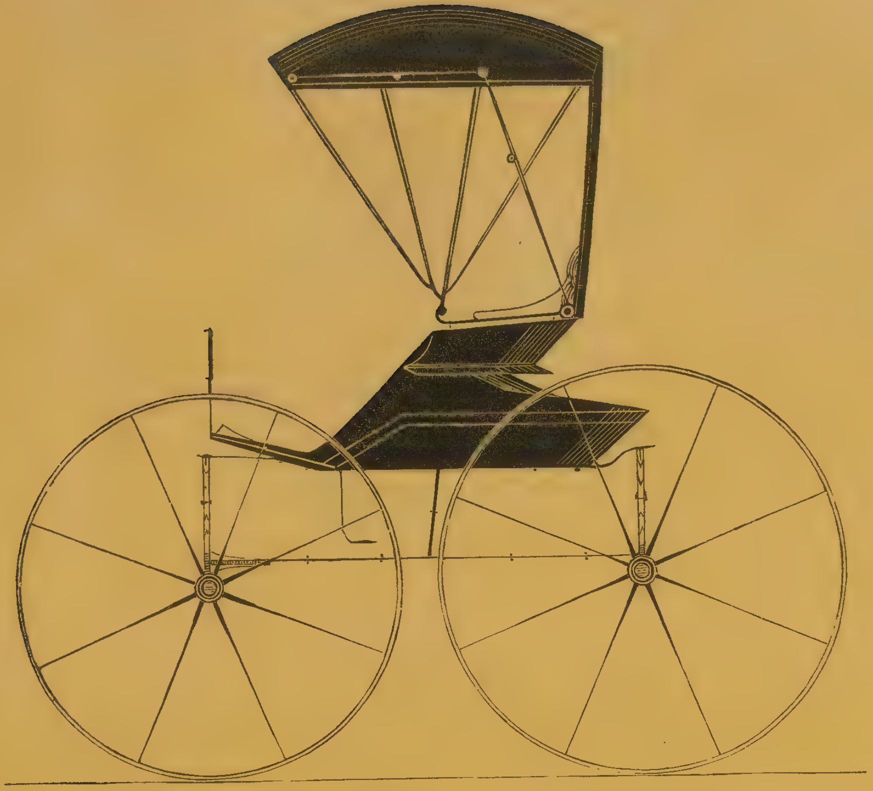
8-SPRING LADIES' PHÆTON.

Plate No. 6.—Half-inch Scale.—Explanation on page 21.



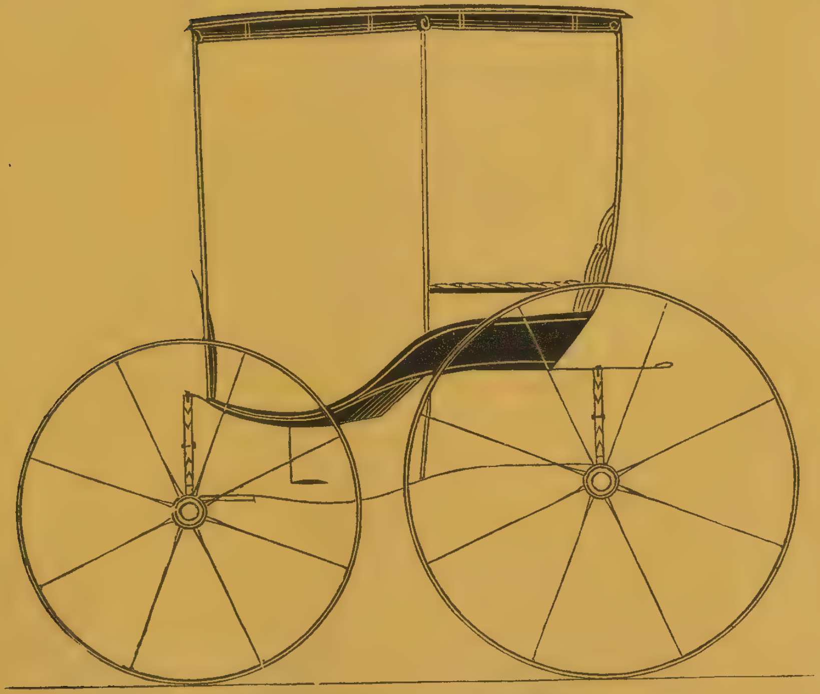
BELMONT PHÆTON.

Plate No. 7.—Half-inch Scale.—Explanation on page 21.



GLENROCK COAL-BOX.

Plate No. 8.—Half-inch Scale.—Explanation on page 21.



PHYSICIAN'S PHÆTON.

Plate No. 9.—Half-inch Scale.—Explanation on page 21.

TO CORRESPONDENTS.

We are obliged to have all matter intended for the JOURNAL in by the 12th of the month hereafter, and we wish those who have charge of the different departments and correspondents generally to take particular notice of the time. This month we are a little later than we anticipated being, owing to our absence from the office for some weeks, and the failure of our co-editors to send their matter in time. We hope hereafter to be able to mail the JOURNAL so that each subscriber will have received it on or before the first of each month, except those on the Pacific coast and in foreign countries. Remember, your contributions *must* be here by the *twelfth* of the month to insure insertion.

SHOOTING FESTIVALS.

We have given in this number a short account of a day of recreation and pleasure to the employees of Brewster & Co., of Broome Street, New York, and expected a report from a similar affair gotten up by the employees of Corbett & Scharch, on 25th Street, New York City, which took place on the same day, October 9, but up to going to press, it has failed to reach us. The employees of James B. Brewster, East 25th St., sent us an invitation to be present at a gathering of the same description, to take place on the 16th, but not being much on the shoot, and business pressing us for time, we failed to put in an appearance. The day was fine, and we trust all enjoyed the oocasion. "All work and no play makes Jack a dull boy."

Fashion Plates Explained.

EIGHT-SPRING LADIES' PHÆTON.

PLATE NO. 6.—It is a noticeable feature at the watering places, parks and drives, that the "Fair sex handle the ribbons," occupying a vehicle designed especially for them. The bodies are generally of willow work, and certainly present a pleasing appearance. The plate here given shows a regular paneled body. The carriage part to be made all iron. Perch iron also. Large parks have become a necessity in our rapidly growing cities, not only as breathing places for those who cannot afford the luxury of a drive, but as a place to show off the fashions in dress, carriages and harness. New York has her eight hundred acres, Philadelphia more than double that amount, and other large cities are following after them.

DIMENSIONS.—Width of body to take 46 inch bows. Moulding: $\frac{1}{2}$ inch deep, chamfered. Body constructed similar to Victoria Phætons, published heretofore in the JOURNAL. Hubs: $3\frac{3}{4}$ inches by $6\frac{1}{2}$. Front band: 3; back: $3\frac{3}{4}$. Spokes: 1 1-16. Tire: $\frac{7}{8}$ by 3-16, steel. Axles: 1 inch steel. Springs: Elliptic and C springs, both $1\frac{1}{4}$ inch wide.

MOUNTING.—Gold.

TRIMMING.—Crimson satin.

PAINTING.—Body: panels, carmine, painted over Indian red. Mouldings: striped, fine lines of gold. Carriage part: Canary color, striped black, broad line. Having striped the carriage part with drop black, go over the striping, when dry, with black japan, which will produce an intense color. Fine lines may be dispensed with. If gold is required select the darkest shade.

BELMONT PHÆTON.

PLATE NO. 7.—The original pattern here given we may safely call a beauty. It is very light and graceful in general outline, has the latest style of boot, scroll springs behind, and as a whole is unsurpassed.

DIMENSIONS.—To take 48 inch bows. Seats square on the corners, with chamfered mouldings on top for receiving stripe. Boot: 28 inches wide, with French style of Dickey seat. The front lid to be hung with ordinary wrought iron butt hinges. Hubs: $4\frac{7}{8}$ by $7\frac{1}{2}$. Front band: $3\frac{1}{2}$; back: $4\frac{1}{8}$. Spokes: $1\frac{3}{8}$. Tire: $1\frac{1}{8}$ by 5-16. Axles: $1\frac{3}{8}$. Springs: $1\frac{3}{4}$, 5 plates. Track: 5 feet.

MOUNTING.—Gold. Instead of pole straps, use gold mounted chains.

TRIMMING.—Wine colored morocco.

PAINTING.—Body: seats and panels, maroon lake; seat skirts: black edged with fine line of tan color. Belt: black. Mouldings: striped gold. Carriage: black, striped with broad line of maroon lake; fine lines of tan color. Spokes: plain, except front, which lay in gold.

GLENROCK COAL-BOX.

PLATE NO. 8.—A very pretty style differing from any heretofore given. The belt drops toward the front, reaching the bracket moulding. Back panel under seat swelled 2 inches. The back may be open or decked as desired.

DIMENSIONS.—Width of seat: 30 inches, to take 3 feet 7 inch bows. Hubs: 6 by $3\frac{1}{2}$. Bands, front: $2\frac{3}{8}$; back: $2\frac{7}{8}$. Spokes: $\frac{7}{8}$. Axles: $\frac{7}{8}$, steel. Tire: $\frac{3}{4}$ by $\frac{1}{8}$. Henry's single plate patent rib springs. Wheels: 4 feet and 4 feet 2 inches. Track: 4 feet 10 inches.

TRIMMING.—Brown cloth.

PAINTING.—Body: panels, plain black. Belt: dark brown. Mouldings: striped gold. Carriage part: dark brown, striped black, and orange.

STANDING-TOP PHYSICIAN'S PHÆTON.

PLATE NO. 9.—A plain, convenient vehicle, suitable for a physician, and also for a large class of customers. Swell panel in the arch; curtains all around.

DIMENSIONS.—39 to 40 inches on seat. Hubs: $3\frac{3}{4}$ by $6\frac{1}{2}$. Front band: 3; back: $3\frac{1}{4}$. Spokes: 1 1-16. Tire: $\frac{7}{8}$ by 3-16, steel. Axles: 1 inch, steel. Springs: $1\frac{1}{2}$, 3 and 4 plates. Wheels: 3 feet 11 and 4 feet 1. Track: 5 feet.

TRIMMING.—Leather.

PAINTING.—Panels: lake. Carriage part: black. No striping.

MOUNTING.—Gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER V.

> "With anxious care he eyes each wave,
> That, swelling, threatens to overwhelm,
> And, his storm-beaten bark to save,
> With skill directs the faithful helm.
> With joy he drinks the cheering grog,
> Mid storms that bellow loud and hoarse;
> With joy he heaves the reeling log,
> And marks the lee-way and the course."

As soon as we came to an anchor we were surrounded by a perfect fleet of shore boats; some with fruits, fresh meat, fresh bread, fish and vegetables; others with women, white and black, eager for the contract of washing the officers clothing. Some of the old sailors seemed to be well known here, judging from the number of people who made it their business to recognize Tom, Bill or Jack; and there appeared to be a great deal of confidential talk and whisperings between them and the tars, which I did not at first understand, but I soon guessed the reason when I saw three or four of the "old coons" reeling half drunk; and about this time the officers must have discovered the game, for the decks were ordered to be cleared of all strangers. Some of the boys took a sudden liking for fresh fish after this, and one fellow, who used to be eternally fishing wherever and whenever an opportunity occurred, was asked by one of the officers what he wanted to be spending his money in buying fish at fifty cents each, when he could catch all he wanted by dropping his hook and line over the side, said, "Well, he was tired of fishing, and thought he would try how a bought fish tasted." I guess it tasted well, for he was as drunk as a lord in half an hour, and the fish trade collapsed by an order to allow no more fish aboard, as they did not seem to agree with Americans. This was called "sucking the monkey;" there was a small bottle of liquor inside the fish.

CAPE TOWN

s a neat clean town built in the crescent at the head of Table Bay, and under the bunch of hill spurring out of Table Mountain. I set it down as a British-Teutonic-Woolly-headed-Africano Lay-out, and I am pretty near right, for the majority of the juvenile population have a decided inclination to kink in the place where fine-tooth combs ought to be used on them; but there is a great deal of business activity here, and the people have a wide-awake energetic look about them.

TABLE MOUNTAIN

towers high above the town and all its surroundings; its top covered with snow for a great part of the year, it tempers the climate to a great extent, so that the mean temperature is about 68 degrees, the lowest being 53 degrees. Table Mountain is 3,582 feet above the level of the sea, and has a plain or level space on its summit of about ten acres in extent; looks as if the top of the mountain was sawed off. When a change of weather is coming on it can easily be told by the cloud, which lowers down and covers the top of the mountain; this is said to be "*laying the table cloth.*" Then the ships in harbor get ready for a blow; extra anchors are let go, chains slacked out, and steamers raise steam to be ready for an emergency. When the wind comes rushing down between the mountains it is fearfully strong. Often are ships actually blown away from their anchors, although the water may be scarcely ruffled, for the wind is blowing from the shore. In a bad blow ships are often run aground on the soft shingly beach, (to save them from being blown to sea;) this does not injure them, as the beach is so even they can be easily floated off again. On the other hand, when the wind is from the northwest, a terrible sea rolls in here, and until lately there was no protection from it but strong cables, now a fine breakwater is nearly finished, which will make the harbor safe from this point.

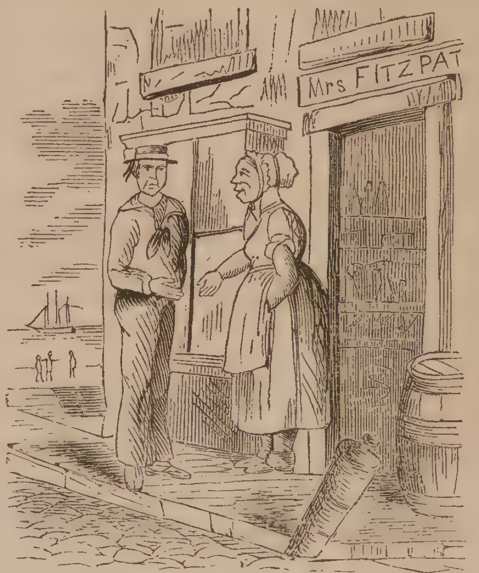
The Cape of Good Hope was discovered by Bart. Diaz, in 1487. He was sent to discover a route to the Indies by King John II, of Portugal, whose ideas were waked up by the story told by "Marco Polo" of his adventures among the Tartars and Chinese. Diaz could not touch there nor double it, on account of adverse winds, so he called it Cabo dos Tormentos, and returned to Portugal, told his story to the King, who, in hope of future success, named the discovery Cabo de Bonne Esperanza, (Cape of Good Hope.) Nothing more was done for ten years. Then Vasco de Gamo succeeded in doubling the Cape, and he found the Mozambique and Malabar Coast. But no use was made of his discovery until England occupied the Cape of Good Hope in 1620. A Dutch colony was established in 1650. The British conquered it in 1795, but restored it to the Dutch in 1803; but the India trade increasing the importance of this point, in a military and commercial point of view, John Bull gobbled it again in 1806, since which time they have held it, *and will probably continue to hold it.*

As every person, and the "rest of mankind," has heard of the

"FLYING DUTCHMAN,"

it may be necessary to tell how this fable originated. During the Dutch occupation of the Cape, a vessel from Batavia tried to enter in winter when none were allowed to enter. The batteries fired on her, although she had a flag of distress flying. The ship was obliged to put to sea, and was lost; and ever since she has been beating about the Cape, and will until the end of time. The spurs of Table Mountain are: the Devil's Peak, 3315 feet high; Lion's Head, 2760 feet high; the Lion's Rump, 1143 feet high, and Symon's or Signal Hill, 2500 feet high.

Our black book time having expired, we got liberty again, and ashore once more we went for fun. An old tar took the lead, and we came to anchor in a bar room of Mrs. Fitzpatrick's tavern. The sign of an Irish harp being the loadstone which attracted our leader, who swore that, with the exception of the Astor House in Shanghae, it was the best house he was ever in; that Mrs. Fitzpatrick was the best landlady he ever knew, for she was never known to turn a sailor into the street while there was room for him on the floor of the bar room. She was mighty glad to see Bill. She ran out from behind her snug bar, and threw her arms around his neck, and began: "Arrah, thin, is it you, *Jack?* N'yah, thin, but it's only dis mornin' I was thinking iv ye, an' says I to me ould man, says I, I'm wondherin when we'll see the purty flag of them Yankee min o' war agin in the bay. Och, thin, bad luck till that war that's keepin' 'em away, ses I. An' thin whilst we wor talkin', what should I see but that iligant ship iv yees comin' up the bay. An' may I niver, but I slaps the ould man's hat over his eyes, and I roars out, hurroo for Ireland an' Ameriky, and run ye ould divil and see if my dacent boy, poor Jack, is aboord iv her. And the next I sees is yereself comin' up the street at the head of as nate a looking lot of boys as me two eyes iver saw." (Blarney, said Mr. Pumice.) But Mrs. Fitzpatrick added, "come, me darlints, take a snifther, and keep away from the 'Africanos.'" The old lady knew her biz, and she made it her biz to know every one. She called every sailor Jack, and as she always kept a mess of potatoes and fish ready cooked, and free of charge for every fellow who drank at her tap, she was a great favorite among the boys, and her house was well known from New York and Plymouth to Calcutta and Yokohama, and "*Mrs. Fitzpatrick's bedroom*" got a wide reputation from us, concerning which I will tell you next month, and how the liberty men of the *Comansioux*, 25 in number, managed to sleep in one small bed.



[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 8.

BY J. H. T.

To take off impressions of medals.—A very easy and elegant way of taking impressions of medals and coins, not generally known, is this: Melt a little isinglass glue made with brandy, and pour it thinly over the medal so as to cover its whole surface; let it remain for a day or two, till it be thoroughly dry and hardened; and then, taking it off, it will be fine, clear and hard as a piece of glass, and will have a very elegant impression of the coin.

Sulphur is sometimes used to take off impressions of medals, &c.; the method is this: Having made a ledge of clay about the work, whose impression is desired, and carefully oiled the whole, gently pour brimstone melted in a covered vessel to prevent its firing; upon the metal about the edge of the mould, make a border of clay as before, and lightly oil the internal surface of both; then gradually put into it, to the thickness of about a quarter of an inch, a mixture made up of calcined alabaster and water to the consistence of honey; this, soon growing hard, may be taken out of the mould and gives figures of the coin or medal.

Another way of procuring fine impressions: Take a perfect impression in fine black sealing wax of the coin you desire, but cut away the wax round the edges; then with a preparation of gum water, the color you would have the picture, spread the paint upon the wax impression with a hair pencil, working it into all the hollow places, these being the rising parts of the coin; and the color must be carefully taken from the other parts with a wet finger; then take a piece of very thin paper, very soft, a little larger than the coin and moisten it quite through, place it on the wax impression, and on the back of the paper lay three or four pieces of thin woolen cloth of about the same size. The impression with its coverings should be placed between two smooth plates of iron; then put them carefully into a small press, and screw down to force the plates together; these being brought evenly together by means of the screw press, will take off a true and fair picture of the coin or medal, which, if any deficiency should appear, may easily be repaired with a hair pencil or pen dipped in the color made use of.

If a relievo only is desired, nothing is necessary but to take a piece of white card or pasteboard well soaked in water, then placing it on the wax mould without any coloring, and letting it remain in the press for a few minutes, a good figure will be obtained.

This method of taking off medals, &c., is convenient, and seems much more so than the several ways usually practiced in sulphur, plaster of Paris, &c., wherein a mould must be either formed of clay, horn, plaster, &c., which requires a good deal of time and trouble.

Some take impressions on paper from the medals themselves, by passing them through the rolling press and coloring them afterwards; but this is not only more difficult, but does great injury to the medals by impairing the sharpness of their most delicate and expressive strokes; whereas wax does not hurt the finest medal in the least degree; and, though a brittle substance, it effectually resists a downright pressure.

SPECIAL NOTICE.

EXPIRATION NOTICES TO SUBSCRIBERS OF THE JOURNAL WILL HEREAFTER BE GIVEN BY A BLUE X ON WRAPPER, OR COVER, NEXT THE NAME. SHOULD ANY MISTAKES OCCUR PLEASE NOTIFY US AT ONCE. OUR RULE IS TO DISCONTINUE UNLESS INFORMED TO THE CONTRARY.

A FARMER who had engaged the services of a son of the Emerald Isle, sent him out to harrow a piece of ground. He had not been at it long before nearly all the teeth came out of the harrow. Presently the farmer went out into the field to take notes of Pat's progress, and asked him how he liked harrowing. "Oh! replied Pat, 'it goes a bit smoother now since the pegs are out.'"

PENCIL RULE & SQUARE

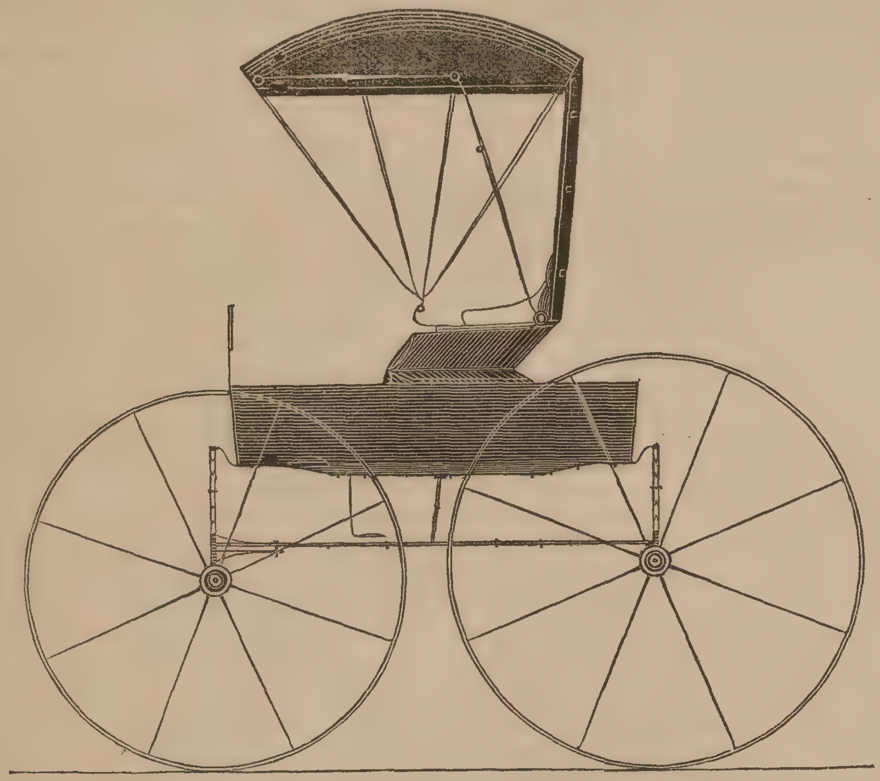
D. BOARD EDITOR.

SCALE DRAFTING.

(Continued from page 7, Vol. V.)

In this diagram we will illustrate the completion of the pencil sketch with India-ink, as was laid out in the last number.

An India-ink draft, with lines drawn and shaded correctly, will resemble a steel engraving. To acquire this art considerable practice and the use of the best quality of drawing instruments will be necessary. We have before illustrated these instruments, but we here give the same list with the price attached to each instrument, as furnished us by James W. Queen & Co., 924 Chestnut Street, Philadelphia, Pa., about the best manufacturers of drawing instruments in this city.



Pair plain dividers, Swiss, $2; German silver, 85 cents.

Drawing pen, Swiss, $1.50; German silver, $1.

Spring-bow pen and pencil, Swiss, $3.80; German silver, $3.25.

Dividers with changeable points, Swiss, $5.75; German silver, $4.50.

Spacing dividers, Swiss, $1.75; German silver, $1.75.

Railroad drawing pen, Swiss, $3.75; German silver, $2.50.

Dotting pen, Swiss, $2.60; German silver, $1.

Pocket dividers, Swiss, $2.50; German silver, $2.75.

T square, $1.75.

Parallel ruler, 35 cents.

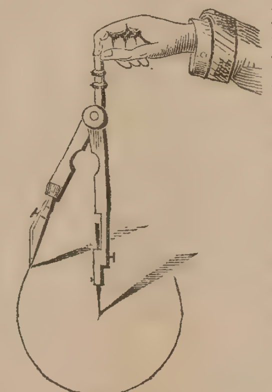
Drafting scale, triangular boxwood, 12 in., $2.

Rectangular protractor for laying off degrees, $1.50.

Irregular curves, 50 cents.

Drawing boards, $2.50.

In preparing for inking, neatness is the first thing in order, being different from penciling, as false lines cannot be erased without spoiling the drawing. You will require a small china saucer. Dip the ink in clear water, rub it well on your finger, which makes a pure liquid free from grit, and from your finger allow it to drop into the saucer. When you have a sufficient quantity prepared, take the camel hair pencil and fill the spring bow pen with the fluid for inking the wheels. You can now practice as illustrated by Fig. 1, holding the top of the spring bow between the thumb and forefinger; this will give you the full control of the pen in making the circular lines. Having practised sufficiently with this on a separate piece of paper to illustrate to you in regard to thickness and evenness of the line, you will be prepared to apply it to the drawing. The width of the line may be regulated by the set screw on the pen.



If there should be any imperfection in the line, you will open your pen and clean out with a piece of chamois skin, and if the pen should require sharpening, use a piece of fine clay stone with water; fill the pen again with ink, as before described, and practice until a perfect line or circle is obtained. Having this, you will now commence and strike the hubs of the wheels as laid out in the diagram; next strike the tire and rims; then, with your spring-bow pen, ink the props, prop nuts, knuckles to joints—always ink *first* that which is shown on the outer surface. With the drawing pen filled with fluid, practice in the same manner as with the bow pen, using a straight edge for your guide. When the line is satisfactory, commence and ink the spokes and joints to top, as in the diagram, keeping the centre of the hub for your guide. All other lines are inked in the same manner, using the T square for the parallel and perpendicular lines. The circle of the top is described by dividers with changeable points; the props and knuckles with the spring-bow pen, as was illustrated in pencil sketch, No. 1 of this Volume, page 7.

When your inking is complete, you will clean off by erasing with India rubber all pencil lines which were used for laying out for a correct draft. For shading you will require another saucer like the one for inking for reducing or getting the required tints. With a small sable hair pencil reduce the ink with water to the shade you want. This can be obtained by practising on a separate piece of paper in spaces of the size of panels of the body, also seat and top. All parts that stand in the foreground should be light; those that stand in the back, dark. The shading of this draft comes next in art to the coloring of a draft, which, to a beginner, might seem discouraging, but he will soon accomplish it by practice.

NEW HAVEN, CONN.

MR. EDITOR:—Will you be kind enough to ask the readers of the JOURNAL the proper size of the *rocker plates* for *landau;* the depth, thickness and best kind of material to be made of? It is a subject on which many differ, and by controversy we may all gain some knowledge. Yours, J. W.

We hope those interested will respond, after which we will give our views. The question as to the lightness to which *plates* can be reduced, and still prevent the rockers springing in open top jobs, such as landaus, cannot be too freely discussed. D. BOARD.

ILLINOIS, Oct. 11, 1869.

MR. EDITOR:—Will you please explain, through the columns of the JOURNAL, your ideas as to the manner of applying canvass to round corners of bodies and seats, and what kind is best for outside canvassing,

And oblige. J. C.

Heavy linen, or the best quality of scrims, are both used. The best shops use heavy linen. The threads of scrims being more open than linen, it is not so well adapted to painting over; and as surface is sought after now-a-days fully as much as any other good quality in a carriage, we find that no pains are spared to secure that result. Before applying the linen, or scrims, rasp up the panel or corner to be covered. Cut the goods; dip it in hot water, and wring out dry, which shrinks it and removes the dressing. Then saturate in hot glue. Apply it, rubbing it down smoothly. When dry, file the edges to a surface and sandpaper canvass all over.

CONSTANTINE, MICH.

MR. EDITOR:—I wish to renew my subscription; I like the JOURNAL first-rate, and with your consent, I should like to ask you a question or two; you seem willing to answer inquiries, I see, by looking over the JOURNAL. You may think the question simple. I wish to know the best way of getting the bevel of the end of a seat corner. Please explain through the columns of the JOURNAL. I have an object in view by asking this question. Yours, O. L.

SQUARE RULE APPLIED TO PANEL AND STICK-SEAT—THE MANNER OF OBTAINING THE CORRECT AND DIFFERENT BEVELS OF THE SAME.—It is with great satisfaction that we answer the above question; it gives us additional evidence of the popularity of the JOURNAL, and the interest taken in it by the writer.

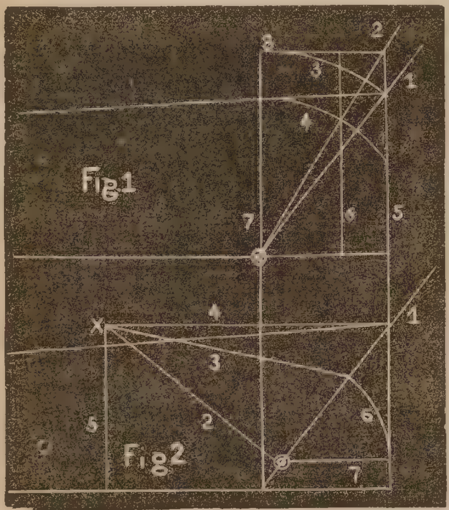


Fig. 1 represents the panel seat. Line 1 the flare of seat. Now to obtain the correct bevel for mitreing, you will square lines 5 and 7, set your dividers at the O point, and strike the curve lines 3 and 4, also lines 6 and 8; from the intersecting point of O and 5 and 8, draw the bevel line 2, this being the correct bevel for cutting the panels for mitreing, the mitre to be obtained by the thickness of stuff used.

Fig. 2 represents the manner of obtaining the correct bevel for dressing the pillars to a stick-seat; line 1 represents the flare. Place the square from line 1 and draw line 2, now square lines 4, 5 and 7, take your dividers, put it at the intersecting points of 1, 5 and 7, being at the O point, strike curve line 6, to intersect with line 1; from this point to where 4 and 5 intersect at X draw line 3; from line 1 to 3 is the correct bevel for dressing your corner pillars.

WE had hoped Spoke Shave would not have failed to make his appearance this month, after his promises in last number, but having waited till the last moment, we are obliged to close the forms before hearing from him. We shall endeavor to prevent a like omission in this department hereafter. PUBLISHER.

PLATFORM SPRING CARRIAGE.

Before entering in detail upon the description and measurement of the different parts constituting a platform carriage, we will define in a few words what would be expected of a mechanic, of either experience, or gifted with a well cultivated eye, to fit him to work out his job in proportion to the body, from a heavy coach to a light calash or six-seat phæton. A graceful, yet strongly-ironed carriage part, will make a job saleable, for the customer, who is every day becoming more familiar with the requisite qualities of a stylish turnout, will bestow a large share of attention to the finish and proportion of the carriage part. Why is it that we find only a limited number of mechanics of general good judgment capable of forging a carriage in perfect harmony with the body, and tasty in its different parts? Because few have a knowledge of body-making—or the action of the carriage as a machine, designed to carry the body—as some understanding of the principles of machinery will materially assist to combine lightness and strength in the different parts of a carriage—and, lastly, for want of a schooled eye; for patterns are of but little use, except to assist in altering sweeps, as necessity demands.

Figs. 1, 2, 3, 4 represent a carriage of a medium size, with a top bed of 4¾ curve, which throws the wheels forward accordingly, thereby allowing the boot to be placed nearer the body, and affording more freedom, to give the former a stylish outline.

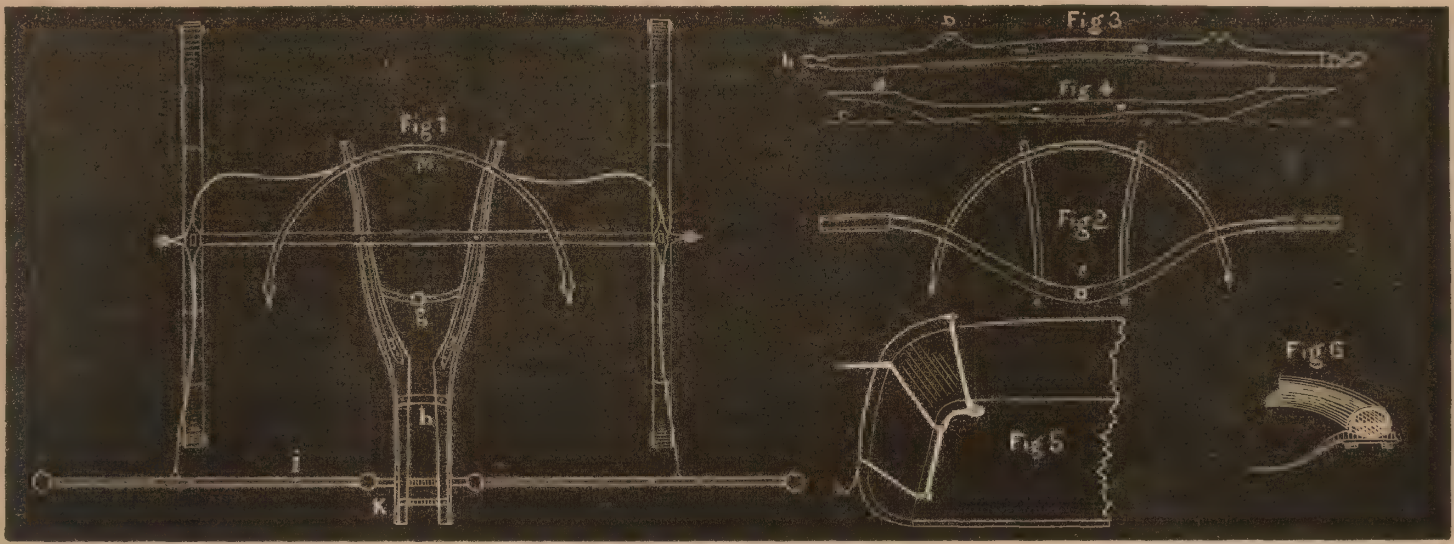
The principle of the turning under of the wheels has been dwelt upon in our former number. All we have to add is, that the space between the highest point of the wheel-house and the top of the tire has to be from 6½ to 7 inches.

FIG. 3.—BOTTOM BED.—Distance from outside to outside of spring 3 feet 4 inches; supposing the track to be 4 feet 5 inches, 6½ inches must be added to either side, to correspond with the width of the track and length of the axle. The wood-work of the bed has the following dimensions: height in centre 2¼ inches; the same at point *a*, or the shoulder for the fifth wheel, mounted by a cast-iron socket 1⅝ inches high; height at scroll end, 1⅝ inches; total height from base line *b* to top of socket, including the bend and ½ inch bottom plate, 4⅛ inches; width of the bottom bed, 1¾ inches.

FIGS. 2 and 4.—TOP BED—TOP AND FRONT VIEW.—Fig. 4 illustrates the length and height of the bed. The height in the centre is 1¾ inches; at point *d* 2⅝ inches from base line *c*. The boot is generally 34 inches wide; the length of the bed is 44 inches, of which 5 inches at either end project outside of the boot and bear the step. This bed has a plate bolted to the top, terminating ½ inch inside of the straight bearing at *d*, forming in the centre the socket *e* for the king bolt, at a thickness of 1 inch, tapering down to ¼ inch at both ends, and rounded nicely at the top.

FIG. 1.—FULL TOP VIEW OF LOWER CARRIAGE.—The connection and dimensions of the iron-work of the furchells demand our attention principally in this view. Pole plate *k*, 2 by ¼ inch, and heel plate *h*, 9-16 inch thick, secure the top of the pole The draw bar *i* has a half-inch plate flush with the outside of the furchells at the intersection with the bar, and forming the rest for the pole. Upper and under plates *l l*, ¾ inch thick, back of the lower bed, and 1¼ inch wide where the fifth wheel rests on, tapering at the top to ¼ inch towards the heel, and wide enough to clear the bead moulding; the under plate, similar to the upper one, runs the full length of the lower side of the furchell, tapering down to ⅜ inch in front of the same. The bridge *g*, 1 3-16 by ⅞ inch, welded to the upper plate, completes the king bolt socket. The stays are of a novel plan, and although simplified, combine neatness and strength, two points which the leading blacksmiths of our city make their study, and respond to the qualities set forth in our introductory remarks.

FIG. 5.—A NEW CONTRIVANCE FOR A SHIFTING RAIL.—This little novelty we noticed in the establishment of J. M. Quinby & Co., Newark, N. J., and is the invention of their very efficient foreman, Mr. S. W. Rodgers. The



only peculiarity about it is the manner of attaching to the seat. It is very simple, economical and perfectly secure, easily adjusted, and, when the top is off, no irons show on the seat, and no nuts to lose. Instead of bolts passing through the seat frame with thumb screw underneath, there is a like number of slots made in the irons that rest on the seat frame at each end, through which a small T-headed bolt is inserted, taking a thread in a small plate let in flush with seat frame. When the top is on, turn these bolts so that the long way of the bolt comes across the slot, and your seat is solid and firm, and nothing to rattle. When removing the top, turn the bolts quarter way around, and the top will lift up and leave the seat clear, except the heads of the bolts, which the cushions cover.

Fig. 6 is an idea suggested by Mr. Rodgers for joining the stay running from king bolt underneath axle to fifth wheel, causing the wheel to wear alike all around. Instead of being bolted to perch on each side, the upper and lower wheels are joined in the centre by a clip, the stay forming the clip bar. The nuts can be tightened as the wheels wear, thus keeping them always tight.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 9.)

PANEL COLORS.

Carmine is a red far surpassing vermilion in richness of tone, yet similar to the best deep English vermilion in height of color. It is often adulterated with vermilion by color men, which, of course, injures its purity. *Pure* carmine will dissolve in aqua ammonia, leaving no sediment.

The various grades of carmine are numbered from No. 1 on up, No. 40 being the quality used by the carriage painter. It is a slow drier and should be mixed with either varnish or a pale japan. Raw oil and sugar of lead will answer where the work to be painted is in no hurry. Carmine has not sufficient body to cover, and therefore must be laid over a ground work. It partakes of the color of the ground, giving a variety of rich hues. It tones down the brightness of vermilion, and in turn vermilion brings out the full richness of the carmine.

When laid on Indian red it is proportionally darker, over dark brown it produces a deep rich tone. It should be painted over a ground mixed of durable colors; laid over rose-pink, or any similar cheap and perishable color, will be time and money thrown away, which includes, of course, a good reputation.

Although classed with the panel colors, we would not advise its use for panels, except on very light buggies, and then but sparingly. For producing a rich bright red stripe it has no equal.

Madder carmine, made from the madder plant, although not in general use for surface painting, is a better drier and retains its freshness and purity longer than the color from cochineal.

Carmine is of great service in ornamenting. Mixed with asphaltum, verdigris, delicate greens, olives, drabs, &c., &c., it imparts a warm tinge without injuring the color. With white it gives a delicate pink. White, Naples yellow, and carmine, a flesh color tint. Washed over green it gives a warm shade. Mixed with vermilion in different proportions, the ornamenter may produce a very rich centre to any ornament requiring a red field. It is indispensable in flower painting.

LAKE.

Of this pigment there are several qualities. Those in common use are English purple lake; Munich, Florence lake; chatamuck or carmine lake, and rose lake. There are finer qualities than those named, and other colors, as royal purple, and those of a brown shade, which are seldom required. The light purple may be imitated with a good quality of lake, ultramarine blue, and white, and the browns with umber, yellow and lake. These gay mixtures are not durable, and do not find much favor.

English purple lake will bear some raw oil in mixing it, the rest are better without oil.

All these transparent colors need to be laid on a ground work similar to their own color when "wet up." Two coats of color, and one of color and varnish, should cover on a solid ground work. But if an extra coat is needed, put it on rather than have the panels *grained.*

Munich or chatamuck lake may be used as a substitute for carmine, if you wish to practice a little deception, or do the work according to the price paid. The colors mentioned above should be ground very fine, so that their full strength may be obtained, thus reducing the actual cost. Fine paint will spread over a greater surface than that which is coarse, to say nothing of the trouble and vexation of having a transparent color rub down showing specks.

Grind your lake heavier than more opaque colors, and do not mix up more than the quantity needed for the work in hand. Use a clean cup and clean brushes. If you pick up a paint cup that has had some other color in it, and half clean it, then snatch up a dirty brush and attempt to lay on a pure, solid color, you will be disappointed. Do as little patch-work as possible in laying on transparent colors. Go over the panels at once, finishing all while yet wet.

Where the panels are very large use a broad brush and work rapidly, blending in the edges while wet. Lay your color on "up and down."

ULTRAMARINE BLUE,

When pure, is a very durable color. It is prepared from the mineral, *Lapis Lazuli*, called ultramarine, (over the sea,) because it resembles the beautiful blue seen in a very clear atmosphere above the waters.

We are not partial to it as a panel color unless it is used clear on a heavy body. Mixed with the red lakes, it tones them down without serious injury to the purity of the color.

It requires a ground work, which should be as near the color you intend to lay over it as possible.

For clear ultramarine a dark lead-colored ground will answer, or take Antwerp or Prussian blue and white, and mix a tint that will match the ultramarine when mixed. It will be found a difficult color to handle by the novice.

The only secret in laying it on solidly is to have sufficient varnish or boiled oil in the color to prevent it "flying off," or, in other words, drying too dead.

The brushes and cups should be perfectly clean, to avoid muddying the color. A good quality of this blue is so pure in tone that it possesses a beauty unsurpassed. Two coats, and one of color and varnish, should cover solidly. Ultramarine like other transparent colors, should be kept air-tight in the cup when not in use, and the ground work be free from roughness or grit. If your color is not clean and free from skins or grit, or if the ground color be coarse, you may expect trouble when you begin rubbing your varnish coats.

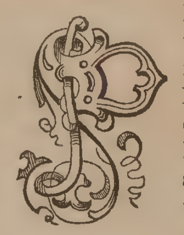
Specks will appear which will not be easily touched up and hidden.

Ultramarine, in combination with white, forms sky blue tints; with white and black, steel colors; with red, purple and violet. In painting, clear white ultramarine should be added to counteract the effect of the oil or varnish. It will give to white lead a purer appearance.

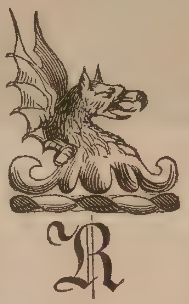
VERDIGRIS.

Rust of copper, an acetate of copper. It is very transparent, of a bluish color, and requires a ground work. On the panels of a heavy carriage, it gives a rich tone of green. It is not used to any great extent as a panel color—greens not being desired by the majority of persons. Milori green, or green lake, is a color resembling chrome green when dry, but is much richer than chrome green when mixed up. It has a strong body, covers well, and with white forms pleasant light greens for sleigh or other fancy work. As a ground color for emerald green or verdigris it will serve a good purpose. It requires practice in the use, and proper mixture of the colors named in this article, which it is impossible to write down. Still, by close attention and a daily watchfulness as to the exact proportions used of oil, varnish or japan, much valuable information may be gained.

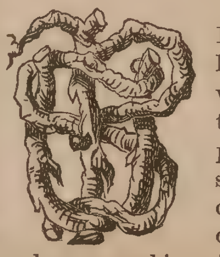
Initial Letter P.—As the first letter of a name is often used, instead of a monogram, combining each one, we have given an original form of the letter P, relieved by a few delicate scrolls. This will be attractive if well executed. Or it may be drawn smaller, and placed beneath a crest, as in the following pattern. Lay the letter gold, shade with asphaltum and verdigris mixed to a dark green shade, high light with pink, mixed of flake white and light red. Paint the dark parts of the scroll (that is, those parts which naturally fall in shadow) with a neutral tint; the light parts with pink mixed of white and carmine.



Crest and Initial R.—We suggest this form as an improvement on the monogram standing alone. The wyvern may be replaced by a horse, hound, or any other animal that fancy may dictate. Lay in either gold or colors. The painter need not confine himself to any set of colors in this class of ornament. They may be painted all red, or blue, or purple, or brown, as may best suit the ground work; but there must be different shades of each of the colors named, and not painted as we heard a painter once say, "That he could paint a dog as good as any body, but he couldn't shade him up." The "shading up," then, must be carefully studied. The wreath at the base should be painted with colors strongly contrasting with the ornament and the letter R.



Monogram S. U. B. Rustic.—Patterns of this kind may be arranged with willow or grape vine, and tacked down on a piece of panel, forming a good study for the student in drawing. Paint in gold or gray, with dark brown and green markings, in imitation of nature.



Weston, Ontario, Sept. 15.

Mr. Editor:—You would confer a great favor on me and many others in the same situation if you could give us some plain directions about varnishing. I do a small business and have to do the paintiug myself, and I cannot make a good job of varnishing.

I varnished a job and in the morning it looked as if it had had an attack of small-pox.

About a week ago I varnished a buggy at night after dark, and in the morning it was gathered up in heaps, and had big blotches all over as if it had been out in a shower of rain.

Whether I did not brush it enough, or what was the matter with it, I do not know. J. S.

Answer.—There is no calling free from trouble of some kind. The carriage painter has not been slighted in this respect, and it would be impossible to conceive of anything more annoying than to find a finished piece of work badly *pitted* or *drawn up*. The troubles you mention are not uncommon, but are visited on the largest and best appointed shops in the country, where painters are employed who have a world-wide reputation for laying on the finishing coat; so that the mere fact of your doing a small business in a small shop should not be a sufficient reason why the varnishing should invariably be poorly done. Varnishing needs to be practiced and followed as a separate branch of the trade almost, if one would attain perfection; still, in a small shop, passable and even good work may be done if the painter has served a regular apprenticeship at the business in a good shop and understands the first principles. If a wood worker, blacksmith or trimmer, attempts to do a good job of varnishing, he may be disappointed at the result, for the bent of his mind cannot be brought down to that nicety which the painter acquires by continued practice.

In order, then, to produce a good job of varnishing, one must have had no small amount of practice in laying on the rubbing coats, and of rubbing them down and preparing for the last or finishing coat. He must be sensitive to the most minute particles of pumice stone or dust that may be lodged anywhere on the body. The careful finisher never allows pumice stone to dry in the corners or along on the bottom edges at any point, but with the water tool searches it out, knowing that one little crevice overlooked may ruin the entire coat of finishing varnish.

The room, body, cups and brushes, must be perfectly clean, and used for *finishing only.* Two sets of brushes and not less than three clean cups should be used. The panel brushes to be used on the panels and nowhere else. The second set of brushes are for the rockers inside of seats, doors, and other places.

In one tin cup draw off varnish for the panels; in the second, that which you require for the other surfaces—the third to be used as a wiping cup. Never wipe the brush you are using on the cup from which you are taking varnish. Provide yourself with a wire stand to lay the brushes on, and a light stool to hold cups and brushes. The sponge, shammy and dusters, should *never* be used on any other work. If the varnish room is not well arranged and fitted up, have screens made for covering up.

See to it that your varnish room is kept quiet and free from the visits of any of the hands, or even the employer himself. Should any one take offence at the rules you have laid down, let them see that you are not to be moved from your purpose; defend the varnish room from intrusion until the work is safe from harm.

Pour out sufficient varnish or leave the cork out of the can so as to give the varnish air at least a half hour before using. Begin by going over those surfaces separate from the panels. Lay on the varnish in sufficient quantity to admit of its being spread, worked down and leveled without dragging on the brush.

Having spread the varnish over a surface, allow it to rest a moment or so and evaporate, then put the brush through it back and forth and "up and down," and let it rest again; in the meantime wipe out around the mouldings, then brush the panel horizontally from top to bottom with lighter strokes than before, run the tool along under the mouldings, go over this with the large brush, and from the bottom of the panel stroke it upward, blending the varnish off toward the upper part near the moulding or upper edges. Do not brush under the mouldings as a finishing stroke.

Finish every coat of varnish "up and down," except on very narrow panels or spaces.

Leave on a sufficient body of varnish to flow out full, which will drown the fine specks; the large grit, if any, must be picked out while working the varnish. Use a pointed whalebone, quill, or a small stiff pencil for picking.

Keep finishing brushes in finishing varnish, cleanse the cups with turpentine, then take soap and water, which, with a piece of hair, scour them perfectly clean, rinse them, dry out with the shammy and hang up in a clean place.

With the above plain directions, fully carried out, many mishaps may be avoided. Varnishes pit and enamel, or draw up under such a variety of circumstances, that a *never-failing* preventive has so far not been found. The body which you varnished after dark must have been colder than the varnish spread over it, or the varnish became chilled during the night before it had time to set. The following hints may serve to ferret out the cause of your failures:

1st. If Noble & Hoare's finishing be used, never lay it over any finishing varnish, not even over their own, and certainly not over a rubbing coat that is not hard.

2d. In the summer time select cool days as far as possible; if the varnish room is cool and shaded so much the better.

3d. When a thunder shower is coming up postpone the varnishing until the storm bursts over the earth.

4th. In early spring, fall and winter, endeavor to have the body, varnish and room of the same temperature as near as possible. It is a good plan to begin varnishing as early in the morning as may be convenient, so that the surface may have the benefit of the heat during working hours, which gives time for the varnish to set before the shop cools down. Keep up a fire all night if possible.

5th. Brush the varnish well through, especially where a heavy coat is laid on. There is no doubt but what carelessness in this particular will occasion irregularities of surface and pitting.

6th. See Page 10, No. 1, of Vol. IV, of the JOURNAL, for further particulars.

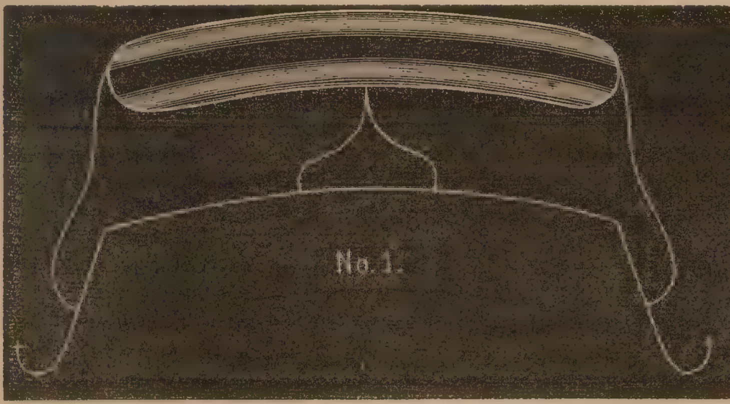
SHEARS, NEEDLE & TACK HAMMER
T. ACKS EDITOR

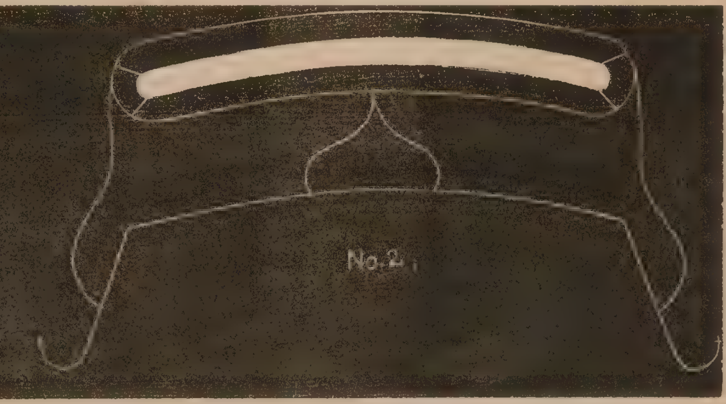
A CHAPTER ON LAZY-BACKS.

We are led to write this by reason of the following letter:

> "Our trimmer finds some difficulty in trimming lazy-backs on OPEN buggies and light two seat open pleasure wagons to suit his fancy and look tasty. Can you advance any ideas in regard to such in your valuable JOURNAL, both for our benefit and others?"

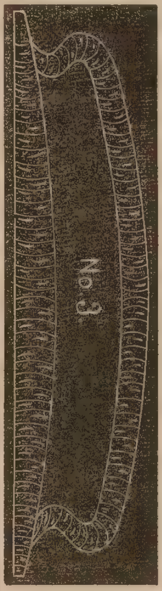
It is certain that unless the trimmer has a good shaped "*wood*" as foundation to start from, he cannot make a stylish job. Maybe that is the secret of the reason why he cannot make his backs "tasty or to suit his fancy." We like to have the wood-work of a lazy-back made to the sweep of the seat, and also bent or hollowed in so as to match the corners of seat, provided it is round cornered, (as most of them now are.) I also prefer the wood work to be not less than four inches wide, but when the wood is too narrow, you simply cannot do much with it. We offer the accompanying styles with the hope that they may be acceptable:





No. 1—Is a very neat style of trimming. Three smooth rolls with leather welt between each roll and the edge finished with welt also, but the seaming welt must show on *inside* edge; in laying off all *three* roll backs, let the centre roll be marked five-eighths of an inch wider than the outside ones; this is done to allow for the width of the welt, which is always nailed on top of the centre roll, and takes up about that space; then, when finished, the rolls will be all of a size, whereas, if you lay them off equal on the wood, the outer rolls will be the heaviest.

No. 2—Shows a three roll back also, with the difference that in this case the outer roll is continued all round the back; this is a very tasty and popular style. You may join the cloth on the corners as marked, either sewed or simply lapped; remember to pull both cloth and welt tight when making up; further, sew your cloth to the inner welt before you nail down, and be sure to line the cloth with a piece of muslin, pasting only on the edges,—these three roll backs may be changed by making the outer roll in wrinkles and the centre smooth, or *vice versa*, or the centre one in small squares and the outside ones smooth or in wrinkles.



No. 3—Is best adapted to dog-carts and two-seat jobs. This would look well with the centre roll plain and the outside ones wrinkled, or *vice versa*, and will do where the arm rail is made for an arm-piece (or rest,) in that case the lower roll to be continued around on the arm-piece. Use rattan for your welts in all these jobs, and show as few black (or finishing) nails of any kind as possible. When leather or morocco is used, we would recommend that the centre roll be made plain (or smooth,) and the outer ones wrinkled with fully one-third fullness for the wrinkles, and *stuff soft* where wrinkles are used. Either of these styles should make a nice job, but the trimmer must see that no irons are fitted to the front face of the wood work of the back, or, at least, that they be put on in such a way that they shall not interfere with or obstruct the sweep of the leather welt; it is best to have the irons let into the back part of the wood work.

PARIS, KY.

MR. EDITOR—SIR:—I learned from a trimmer sometime ago what I would call a "contrivance to aid in seaming up a top," which I send to you, as Mr. T. Acks may think it worthy of publication, but, if not, there is no harm done. It is the best thing for the purpose I have yet come across, and I hardly think it is universally known, and it occurred to me the way for it to become so was to have it printed in the JOURNAL. Take a poplar board about 4 feet long 10 inches wide and ⅝ inch thick, round it off on one side about 4½ inches, bevel this convex edge (on each side) down to a scant ¼ of an inch and your "contrivance" is finished; screw to the *side* of the bench, convex side up, with a couple of screws, and after basting your top together, lay it on the bench flesh side up, and with one-quarter hanging over the board, tack at one end, stretch and tack at the other, and fasten it down with a couple of common clothes pins while sewing. In seaming up a top this way you keep it nice and smooth, which cannot be so well done when using the stitching horse. P. B.

Poetry.

THE WORLD WOULD BE BETTER FOR IT.

If men cared less for wealth and fame,
And less for battle-fields and glory;
If writ in human hearts, a name
Seemed better than a song and story;
If men, instead of nursing pride,
Would learn to hate it and abhor it;
If more relied on Love to guide,
The world would be the better for it.

If men dealt less in stocks and lands,
And more in bonds and deeds fraternal;
If Love's work had more willing hands
To link this world to the supernal!
If men stored up Love's oil and wine,
And on bruised human hearts would pour it;
If "yours" and "mine" would once combine,
The world would be the better for it.

If more would act the play of Life,
A fewer spoil it in rehearsal;
If Bigotry would sheathe its knife,
Till Good became more universal;
If custom, gray with ages grown,
Had fewer blind men to adore it;
If Talent shone for Truth alone,
The world would be the better for it.

If men were wise in little things—
Affecting less in all their dealings;
If hearts had fewer rusted strings
To isolate their kindly feelings;
If men, when Wrong beats down the Right,
Would strike together and restore it;
If right made might in every fight,
The world would be the better for it.

HOW THEY HAD HIM.

When I was young and tender, too,
I had to mind and had to do
Whatever my mother bade me;
She used to have a walnut stick,
Which kept me on the double-quick,
And that was where she had me.

When older grown, and quite a beau
Among the girls, I used to know
A Miss Priscilla Cadmy;
And with the help of smiles and nods
I fell in love at forty rods,
And that is where she had me.

When I was older, say sixteen,
I thought it time to have a queen,
And asked her if she'd wed me;
She said she didn't much object,
Or words something to that effect,
And that was where she had me.

But when, to make the matter straight,
I went up to negotiate
Affairs with Colonel Cadmy,
He said "he didn't care to sell;"
He told me I might go to—well,
And that was where he had me.

I drowned my sorrow in the cup
Until I got my dander up—
I couldn't have been madder—
When she proposed that we be one
In spite of pa—the thing was done,
And that was where I had her.

Two lovely urchins on my knee
I'm proud to say belong to me—
That is, to me and madam—
For when we left our native sod,
We spent a year or two abroad—
And there was where she had 'em.

AUTUMN LEAVES.

Out in the sighing forest
They rustle 'neath our tread,
Like the half-smothered wailings
Of mourners for the dead:
Or, like some wandering spirit,
That, sad and restless, grieves
O'er all its bright days wasted—
Mourn the sad autumn leaves.

Like them our lives are changing;
Like them we, too, must fade,
When pass our few brief seasons
Of sunshine and of shade:
And though, perhaps, our passing
Some home our hearts bereaves,
We're soon no more remembered
Than withered autumn leaves.

Oh, moaning leaves of autumn!
As sad were earthly life,
Were there no future
Undimmed by grief and strife,
Where heartstrings are unbroken,
And not sad spirit grieves—
Where are no faded flowers,
Or withered autumn leaves.

Youth's Department.

For the Coach-Makers' International Journal.

A VIEW OF GREYTOWN.

(Continued from page 12.)

BY DABBS, JR.

I will now give you an account of the way in which we went clamming one day.

There were three of us, and we decided to go to the clam grounds, and get a few bushels of them.

We jumped into the little canoe, (painted red, white and blue,) the smallest one in G., and the only one that could boast of a coat of paint.

We went right across the bay toward a point called "The Three Cocoanuts," and struck right in for the shore. I having the bow paddle, prepared to leap ashore, when I was ordered to my seat by Cornelius Harrison, (the owner of the boat,) who told me to wait awhile.

It was well I did not leap, for what looked liked *terra-firma* was nothing but what in that section of the country are called "Sunk Lands." The grass parted for us, and closed again behind us, so that it looked as though we were going over *dry land*.

About half a mile farther we reached a *bayou*, or, as they are there called, a "*Lagoon*," about six yards wide. I should say the *channel* was of the above width, for the lands here were also sunk, the roots of the giant trees being in some places *six feet* under water.

We paddled along here for about five miles, when we fastened the canoe to a tree, and the two other boys stripped off all clothing (which was not much) and plunged into the water.

They wallowed about for some time (the water a little above their waists) when suddenly Fred stuck his foot into the canoe, and told me to "take it out."

"Take what out?" I asked.

"Why! the clam, to be sure," and looking closer I saw a clam between his toes. I took it out, and directly one from Cornelius' toes. Soon they struck a *bed*, and dived, coming up with their hands full, amounting to about twenty clams.

I then joined them, and the sport became general, and after about an hour's work (or rather play) we had nearly three bushels of clams. We then dressed and started for home, singing merrily as we paddled along.

Just before reaching the "Three Cocoanuts" again, I spied something yellow between the foliage, and calling to Cornelius, asked him what it was.

"Let's go and see," and we went and "*see-ed*," and found them to be delicious oranges, of which we ate greedily, for the passengers having been in G. so long, had eaten up all the fruit, thus making it a rarity.

We then loaded our canoe as full as we dare, and soon reached Greytown, where we carried our prizes up to the hotel in buckets, and the next day had clam soup for dinner, of which we all heartily partook.

* * * * * * * * *

Next door to the "Transit House" stood the church, which was only open while steamer passengers were detained there who had a minister among them.

Mr. Harrison, who kept the hotel, had a very old parrot, who spoke Spanish fluently, and some very little English.

Every Sunday regularly the parrot would perch himself in the orange tree between the hotel and church, and say the Lord's prayer in Spanish, much to the amusement of the guests.

One day he startled them all by saying in pure English, "Say! why don't these old passengers leave?"

This parrot was fed on nothing but native fruits, coffee and bread; the coffee sweetened, but without milk, as they give them nothing greasy, fearing it will make them lose their feathers; this is an erroneous idea, as I have since discovered by keeping a parrot myself, which I fed on everything I ate myself.

These Spanish parrots cannot bear to be called "pretty polly;" the natives call them "*Lorita*," and the parrots can pronounce it in a voice as soft and smooth as a child's.

At some future time I will tell you about wonderful animals I have known and seen, and tell you more of Central America, by a better view of Greytown.

A GOOD REASON.

A boy was once tempted by some of his companions to pluck ripe cherries from a tree which his father had forbidden him to touch.

"You need not be afraid," said one of his companions, "for, if your father should find out that you have taken them, he is so kind he would not hurt you."

"That is the very reason," replied the boy, "why I would not touch them. It is true my father would not touch me; yet my disobedience, I know, would hurt my father, and that would be worse to me than anything else."

Remedies and Receipts.

A TABLESPOONFUL of Indian meal taken in cold water every morning (until relieved) is a sure cure for constipation.

SEASONING SAUSAGE.—To twenty-four pounds of meat add eight ounces of salt, three ounces of pepper, and half a pint of sage.

REMEDY FOR CROUP.—The French have discovered that the white of an egg, given in sweetened water, is a sure cure for croup. The remedy is to be repeated till a cure is effected.

IT is said that a cement for bottle tops, that will keep the most volatile liquids from evaporating, may be made by mixing finely-ground litharge and concentrated glycerine. It dries quickly, becomes very hard, and is easily removed with a knife.

MUFFINS.—One quart of warm milk, a piece of butter about the size of an egg, four eggs, a tablespoonful of salt, one cup of yeast, flour enough to make a stiff batter; beat it up with a large spoon; put it to raise six hours; fill the rings half full; bake them about twenty minutes.

Bugs and Cockroaches.—Boil one ounce of poke-root in one pint of water until the strength is extracted; mix the decoction with molasses and spread it on plates in the kitchen or other apartments which are infested by these insects. All that have partaken of this luxury during the night will be found dead the next morning.

Rancid Butter.—To a pint of water add thirty drops (about half a teaspoonful) of liquid chloride of lime. Wash in this two and a half pounds of rancid butter. When every particle of the butter has come in contact with the water, let it stand an hour or two; then wash it well in pure water. The butter is then left without any odor, and has the sweetness of fresh butter. These preparations of lime have nothing injurious in them.

We copy the above from one of our exchanges, the editor of which says:

"We forthwith obtained some of the most rancid butter, and it was bad enough for any stomach that had more sensibility than a wagon wheel. We doctored it as per recipe, and when placed on the table along with new, good butter, very able judges could not distinguish which was the new butter. Here is a fact worth a year's subscription to a paper."

Paste that will Keep a Year.—Dissolve a teaspoonful of alum in a quart of warm water. When cold, stir in as much flour as will give it the consistency of thick cream, being particular to beat up all the lumps; stir in as much powdered rosin as will lay on a dime, and throw in half a dozen cloves, to give a pleasant odor. Have on the fire a teacup of boiling water; pour the flour mixture into it, stirring it well at the time. After a very few minutes it will be of the consistency of mush. Pour it into an earthen or china vessel; let it cool; lay a cover on and put into a cool place. When needed for use, take out a portion and soften it with warm water. Paste thus made will last twelve months, and it is better than gum, as it does not gloss the paper, and can be written on.

To Drive Away Roaches and Ants.—Take powdered borax and scatter wherever cockroaches most frequent, and they will disappear directly—a safe and efficacious remedy for a most annoying vermin. Ants can be driven away out of cupboards if lumps of camphor are scattered about them. Ants object to strong scents, and in tropical climates are prevented from entering rooms by powerful scented oils and gums. A sponge can be sprinkled with sugar and laid upon shelves when ants are numerous; the next morning plunge the sponge quickly into boiling water, and most of the intruders will be destroyed. Then scatter camphor, and you will have no trouble.

Scraps of Humor.

The hog may not be thoroughly posted in arithmetic, but when you come to a "square root" he is there.

What is the difference between a belle and a burglar? One wears false locks, and the other false keys.

A "great brute of a husband" advertised in the morning papers for a strong, able-bodied man to hold his wife's tongue.

A writer, trying to be severe upon Boston, is only funny when he says the city is called the "hub" because a *fellow* gets *tired* going about it.

A tipsy Irishman, as a funeral procession was passing by, was asked who was dead. "I can't exactly say, sir," said he; "but I presume it is the jintleman in the coffin."

Young Lady: "Oh! I am so glad you like birds; which kind do you admire most?"

Old Squab: "Well, I think the goose, with plenty of stuffing, is about as good as any."

A gentleman who has been struck by a young lady's beauty, has determined to follow the injunction, and "kiss the rod that smote him."

A Yankee being asked to describe his wife said, "Why, sir, she'd make a regular fast-going steamer, my wife would, she has such a wonderful talent for blowing up."

Customer—"Do you call that a veal cutlet, waiter? Why it is an insult to every true calf in the country." Waiter—"I didn't mean to insult you, sir."

A photographer in Massachusetts was recently visited by a young woman, who, with sweet simplicity, asked, "How long does it take to get a photograph after you leave your measure?"

A tiresome talker once said to a public man he had incontinently bored, "An oyster is pleasant to eat, though repulsive to look at." "Yes, but then he knows when to shut up," was the reply.

A man being awakened by the captain of a passenger boat, with the announcement that he must not occupy his berth with his boots on, very considerately replied, "Oh, it won't hurt 'em; they're an old pair."

A Portland school house caught fire the other day, and as the boys watched it, one belonging to another school said, enthusiastically and honestly to his companion, "Oh, Johnny! don't you wish it was our school house?"

The editor of the Springfield, Missouri, *Leader* has been advertising for a boy, for several weeks, to learn the printing trade, and on Thursday his wife filled the order for him, which shows that advertising pays.

The following conversation was overheard in Norwich the other day: "C c-can that p-p pup-parrot t-ter talk?" asked a stuttering fellow of a German. "Suppose he no can talk so moche better as that what you talk, I chop he head off," was the reply.

His Admiration.—A greenhorn, standing behind a sewing machine at which a young lady was at work, looking alternately at the machine and its fair operative, at length gave vent to his admiration with, "By golly, it's purty, 'specially the part covered with calico."

Papa—"Well, sissy, how do you like your new school?"

Sissy—"Oh, so muts!"

Papa—"That's right. Now tell me all you have learned to-day."

Sissy—"I have learned the names of all the little boys."

An offended woman, not having a special invitation to the funeral of a near neighbor, sent the following note to the mourners: "I think I have been slighted in being omitted from your list of invitations. We shall probably have a funeral at our house one of these days, and we won't invite you."

A clergyman was preparing his discourse for Sunday, stopping occasionally to review what he had written and to erase that which he was disposed to disapprove, when he was accosted by his little son, who had numbered but five summers: "Father, does God tell you what to preach?" "Certainly, my child." "Then what makes you scratch it out?"

The New Albany *Commercial* tells a story of a country girl who rode into the city to do some shopping, and, after making what purchases she needed, was asked by a clerk, in the customary formula, "if there was anything else he could do for her." Her reply was calculated to amaze him a little; "Oh no, sir; unless you will be kind enough to go out and milk the old mare, for I rode her from home without the colt."

A venerable friend and dashing buck, driving their respective vehicles, met in a narrow road where neither could pass without the consent of the other. After some dispute as to which should first turn out, the buck drew a newspaper from his pocket and set abont perusing it very diligently, upon which the friend with characteristic composure asked: "Friend, has thee another newspaper in thy pocket?" "No!" "Then when thee has done reading the one in thy hand, I would thank thee to loan it to me!"

"Ma, cousin Bill he's in the parlor with sister Jane, and he keeps biting her."

"What! William biting my Jane?"

"Yes'm. I seed him do it ever so many times. Bite her right on the mouth, and the tarnal gal didn't holler a bit, ma."

"Ah, never mind, Ned, I guess he didn't hurt her much."

"Hurt her! cracky! why she loves it, she does; cos she kept a lettin' him, and didn't say nothin', but just smacked her lips as if it was good, she did. I seed it all through the key hole. I'll fire taters at him the next time, see if I don't."

Unwilling to go to Heaven.—There was a clergyman who often became vexed at finding his little grandchildren in his study. One day one of these little children was standing by his mother's side and she was speaking to him of heaven.

"Ma," said he, "I don't want to go to heaven."

"Don't want to go to heaven, my son?"

"No, ma, I'm sure I don't."

"Why not, my son?"

"Why, grandpapa will be there, won't he, ma?"

"Yes, I hope he will."

"Well, just as soon as he sees us, he will come scolding along, and say, 'Whew, whew, whew! what are these boys here for?'"

Miscellaneous.

Hints to Writers and Speakers.—William Cullen Bryant gave the following excellent advice to a young man who offered him an article for the *Evening Post*:

"My young friend, I observed that you have used several French expressions in your article. I think, that if you will study the English language, that you will find it capable of expressing all the ideas you may have. I have always found it so, and in all that I have written I do not recall a single instance where I was tempted to use a foreign word, but that, on searching, I found a better one in my own language. Be simple, unaffected, be honest in your speaking and writing. Never use a long word when a short one will do. Call a spade a spade, not a well-known oblong instrument of manual labor; let a home be a home, not a residence; a place, a place, not a locality, and so of the rest. Where a short word will do, you lose by using a long one. You lose in clearness, you lose in honest expression of your meaning, and in the estimation of all men who are competent to judge, you lose in reputation for ability.

"The only true way to shine, even in this false world, is to be modest and unassuming. Falsehood may be a very thick crust, but in the course of time will find a place to break through. Elegance of language may not be in the power of all of us, but simplicity and straight-forwardness are.

"Write much as you would speak; speak as you think. If with your inferior, speak no coarser than usual; if with your superior, no finer. Be what you say, and within the rules of prudence. No one ever was a gainer by singularity of words or in pronunciation. The truly wise man will speak so that no one will observe how he speaks. A man may show great knowledge of chemistry by carrying about bladders or strange gases to breathe, but he will enjoy better health, and find more time for business, who lives on common air."

Operatives Abroad.—The great coach-making establishment at Lauenstein, in Hamburg, which employs fourteen hundred workmen, suffered last year a loss of $33,730. The proprietors therefore informed the workmen that a reduction of twenty-five per cent. would be made in their wages. This reduction the artisans have refused to accept, and have struck work.

A son of an ex-President of the United States from Virginia, who has become utterly debased by indulgence in strong drink, was Sunday admitted to a charity ward in one of the hospitals of Washington.

"THE MAN WHO LAUGHS."

BY VICTOR HUGO.

"Laborer of the mountain, who is this man?"
"A man," (or a mouse.)
"What tongue speaks he?"
"All," (against the poor man.)
"What country?"
"None and all," (nowhere and New York.)
"What God?"
"God," (mammon.)
"How do you call him?"
"The madman," (correct.)
"How do you say you call him?"
"What is he in your band?"
"He is what he is," (a fault finder.)
"Do you see that?"
"What?" (new style.)
"That," (ox-team.)
"What?"
"Away there," (on the Hudson.)
"The blue?"
"Yes," (the green.)
"What is it?"
"A bit of sky," (no, latin.)

Periodicals.

The American Artisan continues its weekly visits, its columns crowded with valuable information for the inventor and mechanic. It is devoted to arts, mechanics, manufactures, engineering, chemistry, inventions and patents. The illustrations are finely executed, giving a faithful representation of the subject in hand. The official list of patents is published weekly. Brown, Coombs & Co., Publishers, 189 Broadway, New York.

Mechanic and Inventor is devoted to practical and reliable information regarding patents and patented articles. It is issued monthly at Detroit. If you wish to bring your inventions before the public, you will find this paper a valuable auxiliary. It has a wide circulation throughout the West, giving to persons from that section a *certain* medium of placing their inventions before the people. Address Thomas S. Sprague, No. 1 Arcade Buildings, Detroit, or Nos. 20 and 21 Major Block, corner Madison and Lasalle streets, Chicago.

Oliver Optics.—The juveniles are quarreling over it, each one claiming the right to first cut the leaves. It affords them many a pleasant pastime, and may safely be placed in the hands of "our boys and girls."

The Painter, Gilder and Varnisher's Companion.—The thirteenth edition, revised, with an appendix, has been laid on our table. In looking through it, we notice much that must be valuable to those who follow the trades specified. Gilding, varnishing and glass staining, graining, colors and coloring, tests for the detection of adulterations in oils, colors, &c. Address Henry Carey Baird, 406 Walnut street, Philadelphia.

Zell's Encyclopedia.—Semi-monthly part, No. 12, has been handed in. It gives us as the closing word "Celery," which, by the way, is just in season for that delicious vegetable. It is issued in weekly and monthly parts, thus placing it within the reach of all. Weekly, 10 cents per number; monthly parts contain five numbers, at 50 cents. The work is to be completed within two years, at a cost not to exceed $25 complete, unbound, or $27.50 bound in two volumes in good English cloth.

Phrenological Journal for November gives the portraits and sketch of the lives of Asa Packer, the late Gen. John A. Rawlins, Secretary of War, and the late Wm. Pitt Fessenden. The temperament and traits of character are given, proving that the conformation of the head has much to do with a man's bias of mind, yet not relieving him of responsibility for his actions. The probable size of the head of Washington is still in dispute; the scales now appear to be turning again in favor of the "big heads." The moral tone of this work is excellent, and may safely be placed in the hands of the young. *We* think a great deal of the *Phrenological Journal.*

Peterson's Magazine for November has a beautiful steel engraving, "The Messenger of Love," illustrating a powerfully-written story. The colored steel fashion plate is very handsome. The pattern for a tidy, to be worked in Java canvas, printed in the appropriate colors, will give pleasant employment to fair fingers. Now is the time to get up clubs for 1870. Price, $2 a year; to clubs the terms are cheaper still. Address Charles J. Peterson, 306 Chestnut street, Philadelphia, Pa.

Ladies' Friend for November has been received. A beautiful steel plate, "The Sisters," is worth the price of the book for one year. The fashion plates are tolerably well executed, the literary contents of a high order. A beautiful steel engraving, called "Taking the Measure of the Wedding Ring," will be sent gratis to every single ($2.50) subscriber, and to every person sending on a club. Terms, $2.50 a year. Address Deacon & Peterson, No. 319 Walnut st., Philadelphia.

The Galaxy for November is fully equal to those that have preceded it. The engraving, "Wearied with Everything," tells its own story. The contents are second to none. Charles Read's new story is continued in this number. Price, $4 per year. Address Sheldon & Co., 498 and 500 Broadway, N. Y.

Packard's Monthly.—The young men's magazine needs but the mention of the name from us, as it has already attained an enviable reputation.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—A First-class Body-maker and Draftsman—a *live man*—capable of doing all kinds of work in a large factory, and willing to go West. The best of reference will be required. To a hand that will suit, a good permanent situation will be given. Address this office.

Wanted—Numbers 2, 4, 5 and 6 of Volume III of this Journal, for which a like number of copies of either Volume IV or Volume V will be returned. The person sending will specify the numbers desired.

Wanted — A *first-class* Carriage Painter. Address Glass Box 305, Omaha, Nebraska.

Wanted—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

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Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY
SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, October 20, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
“ snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 40 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
“ Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50.

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
“ Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
“ Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
“ Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 40 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.

Buckram, per yard, 16 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
“ body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.

Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30; English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.

Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 33c.; 6-4, 45c.; drilling, 5-4, 46c.; 48 inch, 48c.; 6-4; 62c.; duck, 5-4, 63c.; 50 inch, 68c.; 6-4, 75c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 60c.; 48 inch, 62c.; flock drill, 48 inch, 95c.; do., muslin, 85c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 15c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.50; ¾, 1.58; New York pat., ⅝, $1.12; ¾, $1.20.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
“ Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $4.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $30.

Leather, per foot, dash, No. 1, 14c.; do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 26c. to 28c.; do., No. 2, 24c.; enam. trimming, 24c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
“ spoke ten. machine, each, sm., $15; large, $25.
“ bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.
“ improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
“ Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
“ Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
“ Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $2.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2.15; 1⅛, $2.50; 1¼, 2.65.
“ close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
“ close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
“ ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
“ neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
“ Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.

Slat irons, wrought, N. Y. pat., per doz. sets, 4bows, $12
“ Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
“ plated, short, $1.20; 1 long iron, $1.37.
“ japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.
“ Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 23c.; 1½. 3, 4 and 5 plates, not shorter than 33 inch, 22c.; shorter than 33 inch, per lb. extra, 3c.
“ Bright oil-tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.
“ Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top holders, Thomas patent, buggy, $5 each; extension, $7 each.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.25; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
“ Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
“ dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
“ machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.

Thread, machine. Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb., No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 1C, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
“ ash, red oak and common hickory, per sett, 1, 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
" hickory, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.60.
Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2.25 per set.
Poles, hickory, per dozen, rough, $12; finished, $16.
Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.
Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.
Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
" " double " $4.50 "
Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.
Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.
Seat arms, per dozen pairs, $1.25.
Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.
Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.
Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.40; deep, $1.30; Ger. gotn. pale, $1.40; deep, $1.30; Chinese, $1.30; Trieste, $1.25; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 14c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 14c.

Yellows—Pure chrome, L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.15; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000, 85c.; 0000, 95c.
Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.
Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.
Best Paint Mills—Large, $8; small, $6.50.

UNITED STATES BUSINESS DIRECTORY.

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Names will be inserted under any of the following headings, for balance of present volume, for one dollar each name. Those marked with an asterisk see advertisement in the Journal.

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*HARPER, HENRY, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

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*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winsted, Conn.

Brush Manufacturers.

*THUM, CHARLES D., 150 North Third street, Phila.

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NORCROSS, H. S., (light,) 1712 Coates street, Phila., Pa.
SHEW, LEVI W., 127 Park street, New Haven, Conn.
TOWNSEND, C. T., 116 Dixwell av., New Haven, Conn.

Carriage Bolt Manufacturers.

GARRETT, KENT & CO., 207 Shipley st., Wilmington.
HAYDON, A. & M., 22d street, above Vine, Phila., Pa.
*SCOTT & DAY, 38 North Third street, Phila., Pa.
SHIELDS, WM., 23d street, above Race, Phila., Pa.
*SKELLEY, T., 24th st., below Callowhill, Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.

Carriage Castings.

*FITZGERALD & FLAGG, 218 N. Third st., Phila., Pa.

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BROWN, S. N. & CO., Dayton, O.

Coach Hardware and Trimmings.

*ATWATER, H., 1625 Market st., Phila.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
GARRETT, KENT & CO., 207 Shipley st., Wilmington.
HAYDEN & LETCHWORTH, Auburn, N. Y.
KEIM, GEO. DEB., 162 North Third street, Phila., Pa.
KENNEDY & CO., 305 Arch street, Phila., Pa.
*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*ROUSE, J. G. & CO., 4th & Arch sts., Phila.
*SCOTT & DAY, 38 North Third street, Phila.
SNYDER, W. & A. J., 115 North Third st., Phila.

Carriage Draftsmen.

*MULLER, A., 142 Second street, New York City.

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*CAREY & POST, 234 Carter st., Phila., Pa.
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GARRETT, KENT & CO., 207 Shipley st., Wilmington.
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*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
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*ATWATER, H., 1625 Market st., Phila.

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*VALENTINE & CO., Boston, Mass.

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*ODORLESS RUBBER CO., 19 Park place, N. Y. City.

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*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.

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*ATKINSON, W. & CO., 1270 Broadway, New York.
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Varnish Manufacturers.

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*SCHRACK, C. & CO., 152 North Fourth street, Phila.
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AYRES, LIPPINCOTT & CO.,
WHOLESALE DEALERS IN
CARRIAGE MATERIALS AND SADDLERY HARDWARE,
No. 49 NORTH THIRD STREET,
PHILADELPHIA.

We invite the attention of Manufacturers and Dealers to our complete stock of goods in the Carriage line, which we propose to sell at the lowest market rates.

Our facilities in the purchase of goods, in large lines, often enables us to supply them below Dealers and Manufacturers **PUBLISHED** prices.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 3. DECEMBER, 1869. $3.00 PER ANNUM Always in Advance.

THE SIGNS OF THE TIMES.

In the November number we gave an account of the plan for an "Industrial Partnership," originated by Messrs. Brewster & Co., of Broome street, New York, which was disclosed to their employees under circumstances certainly very happy.

Mr. Britton, of that firm, who is a close observer of passing events connected with the labor reform movement, remarked in his after-dinner speech: "If you would secure your house against damage from the coming storm, provide it with lightning-rods."

This figure, taken from nature, is full of meaning, expressing a great deal in a few words. In its application, he appears to have had in view a timely warning to manufacturers to prepare at once for any troubles that might possibly arise in the future between labor and capital. He did not review the past, or make mention of the future; but in the figurative language used, he showed that the past was vividly before him, and, profiting by its lessons, he was ready to come forward, as the representative of their firm, and, by a liberal offer to their employees, set an example which, if adopted generally, would remove all cause for misunderstandings and strikes.

The question whether the workingmen were right or wrong in combining for their own protection, or had committed excesses which honorable employers would not submit to, or that the eight-hour law should or should not be passed, or anything else connected with the vexed questions before the people, none of these were hinted at.

Speaking of his firm only, and not wishing to interfere with others in the manner they saw fit to conduct their business, he nevertheless, in our opinion, gave to the carriage-builders of the United States an example worthy of imitation. The security, then, against coming storms, which this firm has erected, is an "Industrial Partnership;" a lightning rod, whose golden point (capital,) and iron rod (labor,) are connected, and should the bolt ever strike, it will be conducted through its length, and disappear without serious harm.

Co-operation not having been fully tested, the report from the above-named firm will be anxiously awaited; and if, at the close of the first year's business, the profits are shown to be larger, and the workings of the new plan superior to the old, we may look for other builders to imitate the example set.

We do not profess to understand much about "Industrial Partnerships," not having had any actual experience therein; but judging from what we know of human nature, we incline to the opinion that it will take a long time to so perfect the government of such a partnership as to secure perfect harmony among its members.

But, as we are taught by our failures where our weak points lie, we advance toward perfection only when we seek to overcome them. We see this in our every-day intercourse with the world, and find it interwoven with all the concerns of man.

It would be foolish for an architect to attempt to lay out a draft, or perfect a model, without making some mistakes, or produce lines which would not suggest others more pleasing.

Industrial plans may be defective, but they cannot be improved unless they are put in actual operation.

There are employers who are so constituted that the bare idea of associating with their workmen in a partnership would be repulsive; for, having managed their own affairs for years, and struggled up from poverty to the establishment of a business affording them handsome profits, they look upon the new idea as one which will lower their dignity, and place them too near on a level with those whom they have studied to keep under their control.

Persons of this character should not be censured for that which is the result of habit, or it may be a natural pride which is a part of their very being.

If co-operation, or industrial partnerships, are calculated to settle the disputes between capital and labor, there will be individuals found here and there who will give them a fair trial, and as new firms spring up, they will adopt or reject the plan, according as it has been successful or not.

Workingmen are slow to move in any matter, though it tend to their best interests; but, having once aroused themselves, they rush ahead pell-mell, and often, by rashness, defeat the ends aimed at.

The late civil war, which necessarily advanced the price of everything, so that laboring people could scarcely make ends meet, led them to unite in the hope of obtaining a larger share of the profits of their labor. Swift as the wind, the word ran from city to city, and from State to State, until the whole country was in a blaze of excitement.

Some of the leading journals hurled their best arguments daily and weekly at these combinations, not unmixed with that haughty spirit which the possession of large means often induces. Political economy was dealt out without stint. A few reverend gentlemen felt it to be their duty to throw the weight of their influence against it. England was ransacked to find evidence against combinations among workingmen, proving them to be dangerous to society, radically wrong and unlawful. In America, men were arrested as conspirators and thrown into prison.

All these influences brought to bear against the numerous, though comparatively penniless, organizations, had the effect intended, that of breaking up and scattering their forces. These are plain facts, and now that the storm has subsided, let us see what damage was done, and what good is likely to follow.

The workmen lost heavily in time and money, and employers sunk thousands of dollars rather than give an inch. Some large firms parted with their oldest and most reliable hands, and were greatly damaged thereby; for other parties, more liberal, gladly set these men to work, and built up their own reputation. A great many good workmen quit their trades, and sought other business.

A thorough intermixture took place among the hands in different shops, the effect of which is no doubt still felt by some firms.

Extreme measures on both sides brought the combatants face to face in the courts, and settled one point in dispute, viz: that the workmen have the right to peaceably combine for mutual protection.

The good likely to follow this strife is beginning to appear. Co-operation and industrial partnerships are springing up, which give to the workmen an interest and an insight into business affairs, which will prove, if not more profitable, at least a good lesson as to the vexations attendant on any business, and tend to make them feel that money is not gathered by the wayside by employers.

The "Industrial Partnership" acts as a safeguard against further disturbance of the business; proving mutually beneficial, it removes all occasion for trouble.

We notice a more liberal spirit pervading the minds of employers, so that in summing up the matter we may say that the agitation which has been carried on will, in the end, result in a vast amount of good.

The signs are, then, that capital and labor are about to meet each other half way, strike hands, and by confessing their faults, unite on some lasting basis of peace.

We hope we may not be deceived, but live to see millions of dollars thus invested.

EXPRESS WAGONS.

Perhaps no city in the Union surpasses Philadelphia in the number, quality and complete artistic finish of the top wagons used by firms in the different lines of trade. Merchants and manufacturers in the same line vie with each other in the display of these advertising wagons, which has opened up a field of design for wagon builders, the result of which is great perfection and beauty. The platform work is comparatively light, well proportioned, yet serviceable. The painting is very attractive, the colors bright, striping gay, and the pictorial representations of a high order of merit.

Whirling hither and thither throughout the city they present to pedestrians a continual advertisement. The pictures attract by their beauty or oddity, and the lettering is quickly read and its import retained. Look there, at Mrs. Fogy, with her room in disorder on a wash day, her sleeves rolled up, hot steam filling the room, and soap suds flying about, at a late hour in the day, indicated by the clock on the mantel, and then glance at the adjoining painting, where a trim young woman, at the hour of nine in the morning, stands carelessly viewing the situation, with washing finished and tubs upside down; and who will say that that advertisement does not increase the sale of "Dobbin's Electric Soap."

A baker's wagon flits by, a modest appearing young lady, a blonde of pleasant countenance, who looks as if she would not refuse the ragged newsboy a share of the cakes she is bearing toward the oven, is no doubt a paying advertisement. There are many others, which it is not necessary to name, and as they are on the increase, and being more elaborately finished from time to time, the extra outlay must be profitable in the end. In this number of the JOURNAL we give a plate of one of these wagons, which was kindly furnished by Messrs. Fulton & Walker, wagon builders, corner of Twentieth and Filbert streets, where the majority of these fine wagons are built. Having been requested by several subscribers to give something of this class, we are pleased to be able to present one from the extensive manufactory of the above named firm. The side view, in black, as we are compelled to give it, does not do justice to the appearance of the wagons as they are sent out by this firm. We have relieved the sides by corner pieces and lines, and an oval centre, to remove that plainness which it would otherwise have, but we do not wish it understood to approach the style in which they are painted.

The wagon from which our sketch was taken is painted ultramarine blue, lightened up and delicately and profusely fine lined with white, the gearing vermilion, striped black and white. The oval centre painting on the sides of top represents a marble soda fountain; one glass on the counter is partly filled with syrup, while others are sitting bottom up. The effect of marble and the silver faucets are very natural; the outline of the oval is not inclosed by striping of any kind, but is pinked, that is, formed into small semi-circles, which removes a tendency toward a hard outline.

The lettering is lighted and shaded diagonally from right to left, running from a bright orange light through vermilion into carmine, which has the appearance of being dashed on carelessly, yet producing a good effect. Mr. A. E. Goodes is the ornamental painter. This firm turn out from four to seven wagons a week, some of them very large. In fact, they have almost monopolized the trade in fine wagons in this city, and beside export a great many. They also build most of the wagons used by the express companies, and report that they hardly know what it is to find business remarkably dull. We will give at a future time some different styles of wagons, and those of a finer quality.

MOORE'S HILL MALE AND FEMALE COLLEGIATE INSTITUTE.

We were lately favored by the receipt of a copy of the "Thirteenth Annual Catalogue" of the above named Institute, collegiate year 1868–9, which was sent to us by Mr. Geo. W. Wood, Treasurer of the Board of Trustees, who, by the way, served a regular apprenticeship to the carriage painting, afterwards quitting it, and is now engaged in mercantile pursuits at Moore's Hill. He is a subscriber to the JOURNAL, and still takes a very lively interest in whatever may be going on among carriage makers.

Moore's Hill is situated in Eastern Indiana, Dearborn county, on the Ohio and Mississippi Railroad, forty miles below Cincinnati. The College building occupies a nice plat of ground, which is beautified by massive shade trees, and flower beds containing choice plants.

The village is noted for the moral and religious character of its inhabitants. No liquors are sold in the place to be drank as a beverage, which removes a great evil, and is a safeguard thrown around those especially who are sent from a distance, and are from beneath parental care, or the influence of friends.

The prescribed course of study is designed to be systematic, thorough and practical, such as shall best discipline the mind and fit the student for the real practical work of life. It is the design of the institution to make scholars, and not merely to turn out graduates. No student will be advanced till the elementary branches have been mastered, and the student has been examined upon them.

DISCIPLINF.

"The discipline of the institution is strictly parental, and designed to lead the student by mild yet unbending measures to the correction of evil, and to the cultivation of all that is desirable in human character. It relies on the moral sense of the student, his consciousness of right, and his disposition to do right. Yet if these fail the means of correction are at hand."

The charges for tuition are reasonable. Board can be obtained on moderate terms.

We can heartily recommend the Moore's Hill Institute to the readers of the JOURNAL, especially to those who reside in Indiana and Kentucky.

Winter term commences Monday, November 8th; closes Friday, January 21. Spring term commences Monday, April 11th; closes Thursday, June 23.

SPECIAL NOTICE.

EXPIRATION NOTICES TO SUBSCRIBERS OF THE JOURNAL WILL HEREAFTER BE GIVEN BY A BLUE X ON WRAPPER, OR COVER, NEXT THE NAME. SHOULD ANY MISTAKES OCCUR PLEASE NOTIFY US AT ONCE. OUR RULE IS TO DISCONTINUE UNLESS INFORMED TO THE CONTRARY.

NOTES BY THE WAY.

New Haven, Conn.—On arriving at the City of Elms, we experienced what persons generally do when coming down from the great Metropolis—a feeling of repose. The rush and tumble of New York City is pleasant enough while you mingle with the crowd, but when it is exchanged for the quiet of a city like New Haven, there is a sense of weariness removed and a feeling of quiet steals over you.

New Haven is not, however, a lifeless city. Manufacturing of different kinds is carried on, ranging from a toilet-pin through an endless variety of trades up to the coach worth thousands of dollars. Women and men here find profitable employment, and generally are in good circumstances. There is not in our broad domain a more moral, intelligent and industrious class of mechanics.

New Haven has always attracted attention as a carriage making city, and to-day has some twenty-five or thirty shops. Carriage building appears to be the leading branch of trade. The reputation for good work which this city has established is world-wide, and despite the rivalry which other American cities have set up, New Haven keeps pace with if not ahead of all others.

During the last twenty years many new firms have sprung up, while the old ones have steadily enlarged their business, until the supply of light and heavy work is immense.

Lawrence & Bradley build heavy work principally, yet their ware-rooms are always well supplied with lighter grades. This firm is the oldest one we believe in the city, and probably has the most money invested.

H. Killam & Co., build heavy work only. Their factory is well adapted to the business and their artisans highly skilled. Mr. Killam is an old resident of the city, and years ago started in the struggle to build up a trade which honesty and patience have at length rewarded.

It would be difficult to find better workmen than are in his employ, and the exceeding beauty and delicacy of finish put on his work is attracting more than ordinary attention of late.

Wells, Cruttenden & Co., also pay sole attention to heavy work, of the best quality. Mr. Wells being a good draftsman, and possessed of a spirit of enterprise, is not likely to allow others to excel him if he can avoid it. They have lately enlarged their shop.

Kean & Lines build different kinds of work, and claim to be shoulder to shoulder with the best builders in their line. We have seen some excellent work here.

B. Manville & Co., have a factory which is well arranged, and fitted up with every convenience necessary for handling work quickly. They build various kinds and qualities of carriages, and seek to accommodate dealers from different sections, in quantity, quality and price.

Durham & Booth.—These gentlemen are doing a very nice and safe business in the medium-sized heavy styles.

S. M. Weir drives a good trade in sale work, turning out from twenty to thirty jobs a week, which are shipped to all parts of the country. Confining himself to this class of work he is enabled to compete successfully with other cities.

Osborne & Adriance put up light and medium-sized heavy work. The wood shop is graced by our old friend J. B. Edwards, who is well known to some of our readers.

His skill is displayed on the work at this factory in the production of new and practical styles, which are not lightly appreciated.

Hooker & Co., Goodrich, Armstrong, C. Blackman, C. Dippel, Seabrook and others, are the names of other builders who contribute to swell the number of those who make up the force at New Haven.

Divisions and sub-divisions of labor are common in the New England States; so we find it at New Haven in the carriage line.

Body making is one among the number of divisions which is carried on as a distinct trade.

Mr. Chas. T. Townsend carries on such a shop, giving employment to twelve or fifteen men. Orders for bodies of all kinds are promptly filled, including basket phætons.

New Haven has an advantage over many other cities in the cost of completing a carriage.

She gets a great deal of stock at cost of first handling, wheels, axles, springs, lace, ivory, pearl, rubber and bone trimmings, lamps, &c., &c. At these factories there is great life and activity shown, and the most approved machinery in operation.

The New Haven Steam Saw Mill Company supply a heavy demand for carriage wheels, and keep on hand a good stock of oak and hickory spokes, hubs, felloes, bent rims, &c.

Chas. H. Pardee gives his sole attention to the manufacture of coach-lace, fringe, tassels, speaking-tubes, frogs, tufts, cords, &c., and in these delicate parts of the finish of a carriage displays good taste, and making good goods, we are pleased to know that he has demand for all he can supply.

O. H. Swift carries on another branch, which may be classed among the loose pieces about a carriage, and yet those which are essential to a complete finish, as curtain-frames, whip sockets, door handles, spring barrels, lamps, and trimmings generally. Also, is prepared to bend or bevel coach-glass to any shape.

Flesche & Perfente, manufacture ivory, pearl, rubber and bone trimmings, for carriages and cars. Also, ivory fancy goods of every description. We had occasion to notice this firm once before, in connection with the Killam Landaulette, given last May. Their goods are very tastily produced.

New Haven Wheel Company was established in 1845, and the present company was organized in 1853. They manufacture wheels and wheel stuff of every description; also, Sarven's patent wheel. This company have one of the largest factories in the United States, and are prepared to fill orders of the largest kind. They have every appliance for doing perfect work, and as one follows a guide through the maze of work-rooms, where belts are clicking their endless rounds, and the machinery of different kinds, each suited to a certain work, are in motion, he will be apt to decide that a quarter of a century has not passed by since the business was established without teaching many valuable lessons, so that we find the work coming from the machines almost perfect.

They deal in all kinds of carriage woodwork. We must not close this notice without mentioning the name of Mr. E. E. Bradley, secretary of the company. He is of that temperament which is full of sunshine, and we shall not soon forget the cordiality shown us on our first visit as a perfect stranger.

Henry's patent spring, which is made with a single leaf, ribbed in the centre, is one of the novelties we met with. They have been in use for a year or so, and arrangements are being attempted to manufacture them extensively. They have given satisfaction so far as used.

We also would thank our old friends and acquaintances, employers and employees, for the cordial manner in which we were received and our laborious work expedited.

GLEANINGS.

In Germany mica has recently found application for the production of bronze-like colors, which bear the names of "brocades," "crystal colors" and "mica bronzes." * * The French are painting Jonquille yellow striped with lamp black, also blues, reds and browns, and greens. * * We notice that some of the first class private carriages have an ornament on the back panel. The coat of arms, or ornament on the doors and back panel, are all the same pattern. * * The rage for striping seems to be passing away. A goodly number of fine carriages may be seen having but few stripes, and in dark colors. * * The International Industrial Exhibition of the Buffalo Mechanics' Institute, which was held lately at Buffalo, N. Y., was a success. Canadian manufactures were not largely represented. * * A gentleman in Pittsburg, Pa., has invented a new atmospheric brake for cars. It is under the control of the engineer, and on a recent trial on the Pennsylvania Railroad proved to be very effective. * * Since the inauguration of General Grant, the public debt has been reduced $64,352,070,65. * * The sale of heavy carriages improves as the season advances. Landaus, Clarences, and other styles are to be seen dashing along, presenting quite an aristocratic appearance, with their liveried drivers, footmen and gaily caparisoned horses; gold mountings throughout, and gold chains dangling from the horses breasts are "nobby," and generally the handsomest man connected in any manner with the equipage is the driver. * * At the funeral of the late Commodore Stewart, which took place in Philadelphia, Nov. 10th, the driver of the hearse wore *black*, with a broad black hat trimming about six inches wide, and in length reaching down to the waist. The hearse was beautifully festooned with the American colors, and drawn by six black horses, who were guarded by six gentlemen in black, who wore *white* hat trimmings. * * The demand for our new business chart, 14 by 19, increases, send for a sample. Price 10 cts. each. * * Being determined to *push* business despite dull times, and compel the trade to know that the JOURNAL is a live publication, we are, in addition to canvassing, now sending out over nine thousand Circulars to non-subscribers. * * LEE & Co's factory at Alliance, Ohio, has had a prosperous season. They turn out about one hundred jobs a year, consisting principally of good leather top buggies, open or no-top buggies, and some vehicles of a heavier class. During the season they have completed to order two swelled side oval hearses worth $1000 each; two extension top platform carriages for livery stable, price $850: also some sleighs and cutters. These particulars we learned from Mr. J. W. Grimmesey, who prefaced the items with a handsome list of names for the JOURNAL. * * At the Fair of the American Institute, held recently at New York city, the Empire Iron Clad Paint Co., No. 74 Maiden Lane, N. Y., exhibited paints made from pure iron ore, which are called twice as durable as any other paint. A pressure blower was exhibited by B. F. Sturtevant, 72 Ludbury street, Boston, Mass. A multiplying pressure blower by P. Clark of Rahway. N. J., and Root's force blast rotary blower, by S. S. Townsend, 31 Liberty street, New York. * * Wm. D. Rogers, carriage builder of Philadelphia, Pa., was recently the recipient of a set of solid silver, composed of a tray, two goblets and a pitcher, presented by his employees on his moving to his new residence, 1504 North Eighteenth street. In the centre of the tray was the inscription: Presented to Wm. D. Rogers, by his employees, Oct. 1869, on his moving to his new house, 1504 North 18th street. It was a complete surprise to Mr. Rogers, who, on his return to his place of business, acknowledged the compliment paid him in an appropriate manner. It was well deserved, and proves conclusively that employers who are liberal and kindly toward their employees, are fully appreciated. The light and heavy work built by Mr. Rogers, is not surpassed, if equaled, in the United States. May prosperity ever attend him. * * STERRICK'S patent wheel, which has a brass hub, doing away with the use of bolts, will probably supersede all others. R. M. Brinton & Co., of Philada., are manufacturing them. * * B. H. Roberts, of Fall River, Mass., sends us a photograph of a buggy which is hung without perch, on his improved springs and gearing. The body is set on curved loops which drop away from the body at each end, and form an attachment for the ends of the C springs. The steps are forged to the front loops. In turning around, the whole broadside is exposed, which makes it very convenient for ingress or egress. He claims that while the carriage has an easier motion, it is more attractive in appearance, and equally as durable as those set on elliptic springs. The saving in material and labor will be at least $25 on each vehicle.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "FRENCH OR SQUARE RULE" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Vol IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted. Persons having either or all the following numbers of Volume III, and not wishing to preserve them, can have them exchanged for any numbers they may desire in either Volumes IV or V. The numbers we desire are as follows: *November, No.* 2; *January, No.* 4; *February. No.* 5; *March, No.* 6, all of *Volume III.* We can supply full sets of Volume II at $1.25.

OUR NEW BUSINESS CHART.

This chart is 14 by 19 inches, printed on tinted paper, containing nine fashion plates, four monograms, and has an oval centre for manufacturer's card. One of the plates is placed in the centre of the oval space, yet leaving ample room for the name and place of business. This chart is specially adapted for mailing; the cost for sending one unsealed would be only two cents.

Persons ordering may select any styles heretofore published in the JOURNAL, not exceeding nine in number.

Price, $10 for first hundred, and $5 for each additional hundred.

☞ Sample copies sent to any address on receipt of ten cents.

OFFICE CHART.

We are also prepared to fill orders for our oval centre Office Chart. It is handsomely printed on lithograph plate paper, suitable for framing. It is 24 by 30 inches, containing 28 cuts of latest styles coaches, coupes, rockaways, buggies and sleighs, with oval centre for manufacturer's card. This chart, when framed and hung up in the office, presents a very attractive appearance; apart from its value in assisting the customer to select, or more readily make known to the builder the kind of carriage he desires built.

Price, $1; sent post-paid, and secured from damage by being wrapped on a roller. Name not printed in centre unless ordered, which costs $2 extra.

BUSINESS CHARTS

Of all kinds gotten up at reasonable rates.

We are furnishing a very popular card, 18 by 22 inches, printed on PASTEBOARD, containing 14 cuts, with manufacturer's card printed in centre, at the following rates: 25 copies, $12; 50 copies, $18; 100 copies, $30. Same chart, printed on good quality of paper, 100 copies, $15, and $5 for each additional hundred.

No order received for less than 100 copies on paper. Persons can select such cuts as they may wish from those published in the JOURNAL. Sample copies sent on receipt of ten cents.

TO CORRESPONDENTS.

We are obliged to have all matter intended for the JOURNAL in by the 12th of the month hereafter, and we wish those who have charge of the different departments and correspondents generally to take particular notice of the time. This month we are a little later than we anticipated being, owing to our absence from the office for some weeks, and the failure of our coeditors to send their matter in time. We hope hereafter to be able to mail the JOURNAL so that each subscriber will have received it on or before the first of each month, except those on the Pacific coast and in foreign countries. Remember, your contributions *must* be here by the *twelfth* of the month to insure insertion.

Fashion Plates Explained.

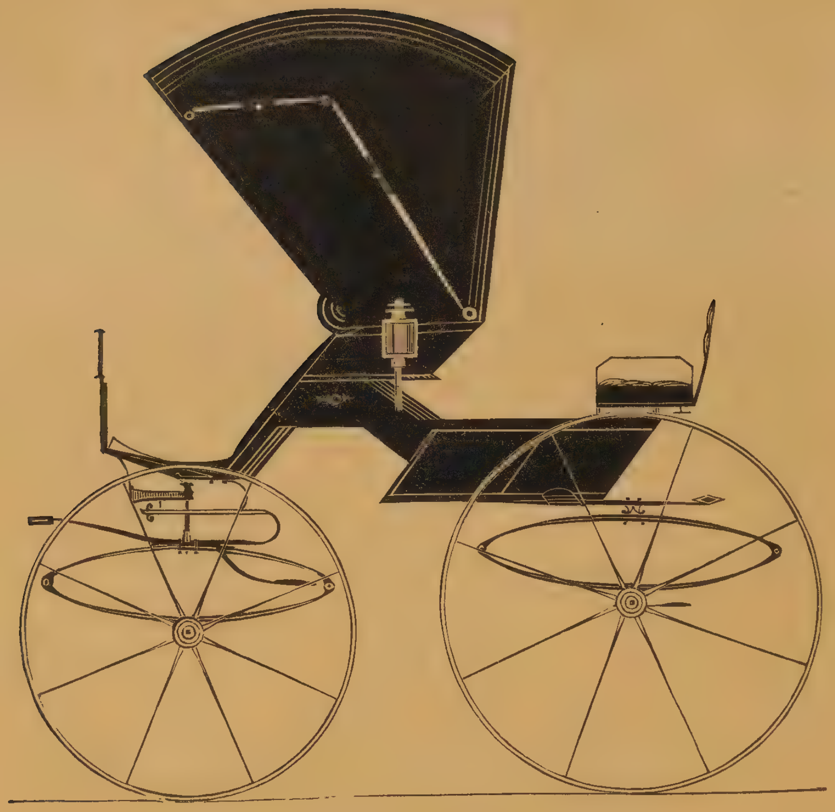
SAVANNAH BEAUTY.

PLATE No. 10.—This Fashion Plate, for its graceful appearance, and original style, must at once recommend itself to the observer. Wherever this class of work is in demand, if built as given, it will not wait long for a purchaser. There is a uniformity of beveled lines which is ever pleasing.

The duster is a swept line, and under the front seat is shown a swelled panel.

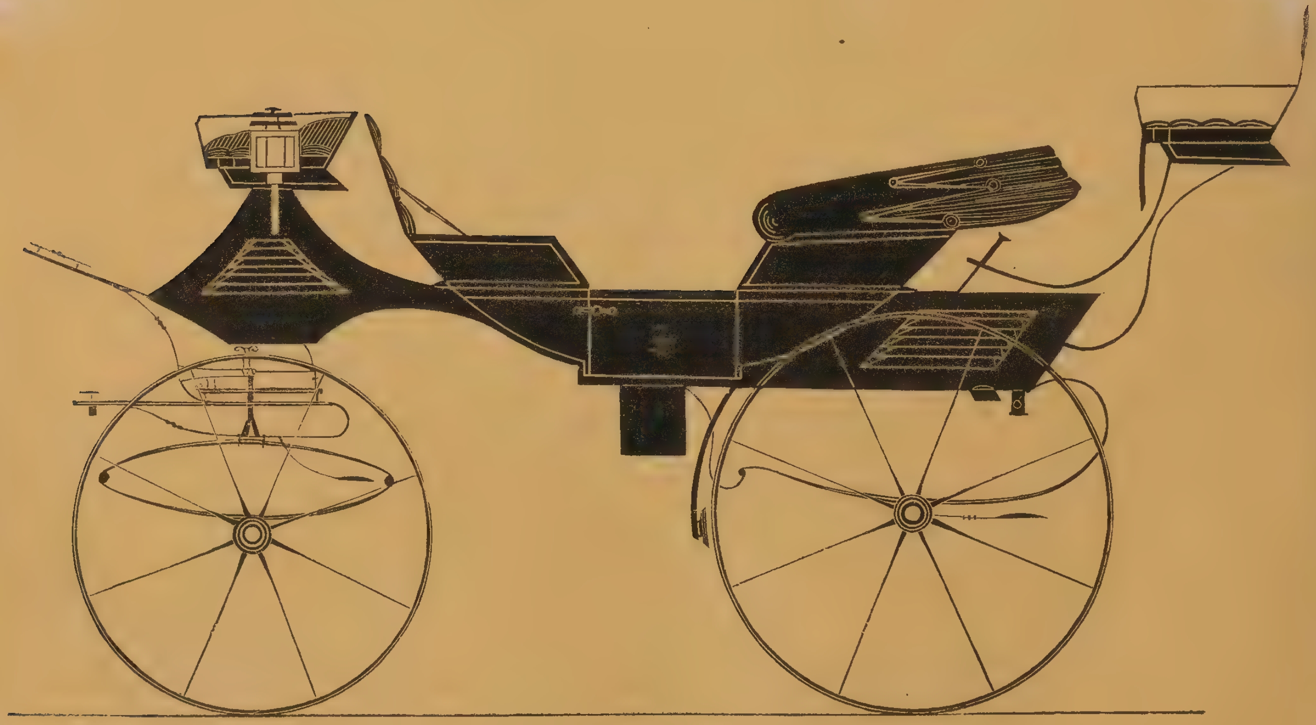
DIMENSIONS.—Width of body to take 44 inch bows.

The back seat is raised with a hinge, and a pivot on the back part supports it. The seat folds in, forming a finish on top. Side panels moulded with ¼ in. half diamond moulding, Hubs: 4¼ by 6½. Front band: 2⅞; back: 3⅝.



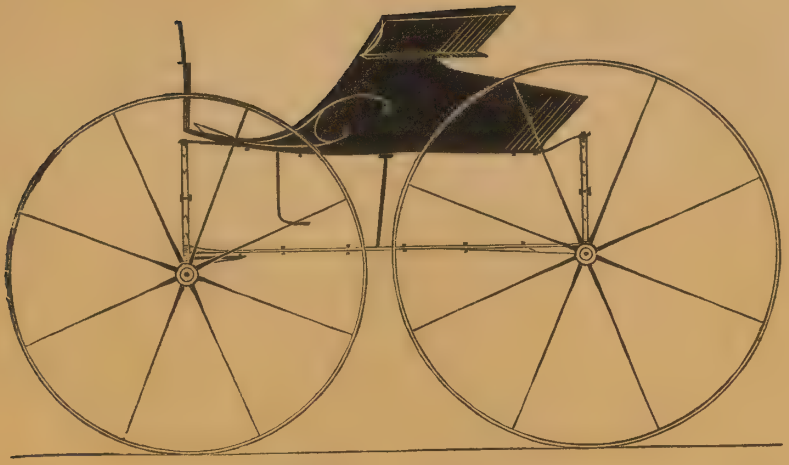
SAVANNAH BEAUTY.

Plate No. 10.—Half-inch Scale.—Explanation on Page 36.



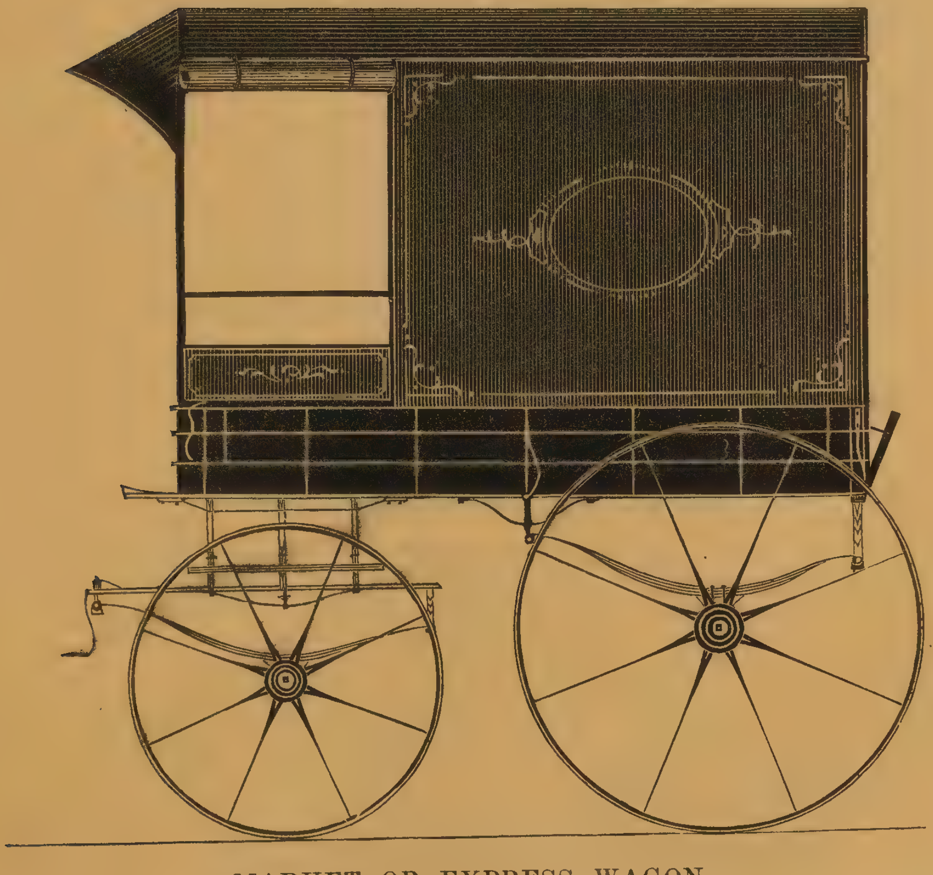
FOUR-IN-HAND DRAG.

Plate No. 11.—Half-inch Scale.—Explanation on Page 37.



SCROLL COAL-BOX.

Plate No. 12.—Half-inch Scale.—Explanation on Page 37.



MARKET OR EXPRESS WAGON.

Plate No. 13.—Half-inch Scale.—Explanation on Page 37.

Spokes: 11-16. Tire: 1 by 3-16, steel. Axles: 1 inch steel. Track: 4 feet 8 inches. Springs: 1¼. Wheels: 3 feet 6 inches and 4 feet.

Trimming.—Blue cloth, back seat leather.

Painting.—Body: Seat and panels clear ultramarine blue. Carriage part: Jonquil yellow, striped broad and fine lines of black, or fine line mixed of Vandyke brown and carmine.

FOUR IN-HAND DRAG.

Plate No. 11.—A superb vehicle combining comfort with beauty and stateliness, and when moving rapidly along is one of the most dashing turnouts that the coach-builder produces.

Some of the main points were taken from a French design, but lightened to suit American taste.

The groom's seat is well elevated. He controls the brake, the handle of which is represented passing through the toe board.

The front seat is hung on ordinary wrought-iron butt hinges, and held in its place, when open, by a brace, which is made with a half inch stump joint and tapered toward each end, forming a socket and pivot screwed to the lid and seat for turning when dropped down.

The further description may be found in D. Board's department, where the cant is shown and a full explanation added.

Dimensions.—Hubs: 4¾ by 7 inches. Front band: 3⅛; back: 3⅞. Spokes: 1¼. Tire: 1¼ by 5-16, steel. Axles: 1⅜. Springs: 1¾, 5 plates, C spring the same size, with a cross-spring which is clipped to an iron spring bar, which is bolted at each side of the body. Wheels: 3 feet 8, and 4 feet 2 inches. Track: 5 feet.

Trimming.—French morocco.

Painting.—Body proper: Panels royal purple.

Boot and back projecting panel, which supports the groom's seat, black; lattice work to be painted on. Carriage part: a shade lighter than body panels, with broad lines of olive, centered with gold; distance line of carmine.

SCROLL COAL BOX.

Plate No. 12.—A very neat design. This job should be made very light as the dimensions given below will show. There has been probably no style of buggy body presented in such a variety of forms as the coal box, since its first appearance. Then its name did not belie its shape, for it was in reality a mere box. The name survives, but the likeness of a coal box has disappeared, and it would seem that the lines that may be applied have been almost exhausted.

Dimensions.—Half width, 20 inches on seat. Three-quarters, 26 inches. The front scroll work is raised. Hubs: 6 by 3⅛. Front band: 2⅛; back: 2½. Spokes; ¾. Tire: ¾ by ⅛. Axle: ¾, steel. Springs; half size; 1¼, 2 plates; three-quarter size, 1¼, 3 plates. Wheels: 3 feet 10, and 4 feet. The dimensions given for half size will bring the weight to a little over a hundred pounds without shafts, provided care is taken in keeping the body lightened out. The body should not weigh over fifteen pounds when primed.

Trimming.—Pearl colored cloth, patent leather welt.

Painting.—Scroll panel and connecting space. olive; the other panels and seat black. Seat skirt: olive. Outlines of body traced with fine line of gold. Carriage part: carmine, striped olive, centered with gold. Irons, nuts, bolt-heads, &c., black.

MARKET OR EXPRESS WAGON.

Plate No. 13.—Having been requested to give something of this class, we present this plate, which was furnished by Fulton & Walker, wagon builders of this city. We will give other styles from this first class manufactory, those of a kind which approach nearer to the carriage in general appearance.

Dimensions.—Body: 86 inches long; toe board extending out in front 5¼ inches at ends, and swelled to 8½ in the centre, with toe rod.

Width, 44½ in. outside; depth of body, 12 inches; bottom, sides 1¼ by 3 inches. Slats: ¾ by ⅝. Tail gate hung on a rod, and rests on the end sill when closed, and does not fold inside of the side panels. Top shifting: from top of bottom boards the height is 60 inches. Top is secured to the body by means of irons, as represented in the plate. Hubs: 12 inches long, including sand bands. Front band: 4 inches; back: 5½. Axles: 1¾. Tire: 1½ by ⅝. Hind springs: 2 inches, 6 plates. Cross springs: 44½ inches long. Side springs: 18½ in. back of centre, and 53½ in. front. Front springs: 5 plates, 18½ inches back of centre, and 22½ in. in front. Wheels: 3 feet 3, and 4 feet 3½. For the construction of the carriage part, see D. Board's department.

Rich without Money.—Many a man is rich without money. Thousands of men with nothing in their pockets, and thousands with a good, sound constitution, a good heart, and good limbs, and a pretty good head-piece, are rich. Good bones are better than gold, tough muscles better than silver, and nerves that flash fire and carry energy to every function, are better than houses and land. It is better than landed estates to have had the right kind of father and mother. Good breeds and bad breeds exist among men as really as among herds and horses. Education may do much to check evil tendencies, or to develop good ones, but it is good to inherit the right proportion of faculties to start with. That man is rich who has a flavor of wit and fun in his composition. The hardest thing to get along with in this life is a man's own self. A cross, selfish fellow, a desponding and complaining fellow, a timid, care-burdened man—these are all deformed on the inside. Their feet may not limp, but their thoughts do. A man of fortune, on the brink of the grave, would gladly part with every dollar to obtain a longer lease of life.

Correspondence.

☞ We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "Stray Steps," &c.

CHAPTER VI.

He went into the shed,
Where the cow was in bed:
With a wisp he began for to wipe her,
Then they laid down together,
On the seven foot feathers,
And the cow began hugging the Piper.

I regret to say, that the manner in which the boys patronized Mrs. Fitzpatrick's bar for the remainder of that day and night, was anything but in accordance with my notions of what was right and proper, even among sailors. It was drinks all around, and fill 'em up again Ma'am, until they were unable to empty 'em again, Ma'am.

I indulged in nothing stronger than Cape Wine, yet I admit that it heated my brain and produced a feeling of jollity; still I was not intoxicated. My impulsive friend, *Charley Shears*, was not so careful of the quality and quantity he was imbibing and was rapidly losing his self-control, while the old tars had reached that point which they call "glorious," and now, in concert, were uproariously calling on Charley for a song.

Come, Charley, my hearty, give us a stave? and Charley, in a full round voice, slightly affected, sang:

"We won't go home till morning,
We won't go home till morning,
We won't go-home-at-all;"

And then the old salts chimed in, "We won't go home at all." From the throats of twenty-five men who were past self control or respect, the noise was enough almost to raise the roof off of Mrs. F.'s Hotel.

Becoming wearied with these performances, I seized the first opportunity that offered, to inquire of Mrs. Fitzpatrick whether she could accommodate me with a bed, as I wished to go to sleep.

"Shleep, is it, my Honey. Wisha; niver a man I ever let shleep in me house, onless it was on the bar-room flure. Shleep in a bed-room indade. I suppose ye'd like to have curtains, and mushketee-bars over the bed, and may be its lace ye'd like on the pillow-cases. A fresh wather sailor is what ye are; an more, yere dhrinkin wine all night while the rest of the dacent boys are injyin thimselves. Yah, don't bother me with yer long winded shtory about just coming off watch, whin ye kim ashore. Why didn't ye shtay aboard till ye could stay up all night and not be botherin a poor lone woman, and breakin' up her bit ov a party.

"Ye'll take the boys out iv here, will ye? may be yere not able."

All this was hurled at me, as she stood with her hands on her hips, and her head shaking, while every sentence she uttered increased her anger, and at length wrought her up to a perfect frenzy.

It was a disgraceful sight to see a woman so debased, but what will not the sale of liquors lead a human being to be guilty of.

And yet there was a comical view to be taken of this old dame, for while shaking herself, in her rage, the flapping wings of her *dandy* ironed head-gear (cap) fluttered wildly like "top-gallant stun-sails in a squall." I replied, Mrs. Fitzpatrick, I will not suffer such abuse, and I tell you plainly I am going to bid the boys good-night, for if you cannot accommodate me, I will find some other more *respectable* house, where I can find a bed at least.

Charley's attention being now attracted to our debate, and overhearing my threats to go elsewhere, he came over and slapped me on the back and asked, what, Fred, you are not going to leave us? Everything's all right, my hearty, and if you want to take a sleep, if you go sleep, (hic) all hands'll take a (hic) sleep. Fact of marrer (hic) is, I'm sleepy myself. Here, you landlady, Mrs. Fizparrick, (hic) we're all going turn in.

Ah, then, Jack, me darlint, (said our now accommodating landlady), av course ye will. And here she had recourse to her usual bit of strategy, by inviting all hands up to partake of more of her soul-destroying liquors, and urged them to collar the ould man and compel *him* to stand treat, also, at her expense, hoping to drown their clamors by overpowering them with liquor, knowing that if she could accomplish this they would sink down on the floor like beasts, and fall into the deep and shameful sleep of the drunkard.

I again demanded a place to sleep. Charley heard me and once more "put in his oar." By this time he had got into one of his high-flown English fits, when big words flowed freely, yet not very well selected. Said he, "yes, we'll all turn in, and, boys, I have an imposition to repose to the dissembled aggregation (hic) of the expenders. No (hic) refenders of the great installation of resplendious states, which have the honor to have (hic) such a graceful, beautiful, patriotic and sober set of depresentatives." (Hear, hear.)

Go on, my hearty. Silence, you lubber; Charley's going to make a speech.

Gentleman, again spoke Charley. Order if you please. We are all contoxicated, and we better all turn in.

The cry was then raised. No. Yes; let's stay all night; let's take a cruise round town; when Mrs. F. again came to the rescue with the offer of a treat.

Finding her efforts unavailing, she placed the *ould man* in charge, and said to me, "Here, Jack, agra, ye do look tired out. Niver mind, come, I'll show ayon a nate little room to shleep in, and lave thim fellows to thimselves. Ye are too good for the likes uv em," (blarney.) I followed her up stairs into a neatly furnished clean bedroom, the door of which opened on a long hall or passage way, at the head of which I noticed another door, (and thereby hangs a tale.) After promising to send Charley up she retired from the room, leaving the light.

I soon fell into a doze, from which I was speedily awakened by a fresh outbreak among the party down stairs, and Charley's voice could be plainly distinguished demanding where I was, while the others declared I had deserted them. Mrs. F. was attempting to pacify them. Charley demanded to see me, and Mrs. F. finally showed him up to my room. When he came in I advised him to come to bed, but he would not, saying he wanted to tell them that I was all right. He returned to the party and soon I heard cheer after cheer. A few of the sailors had fallen down on the floor, but about twenty were still clamoring for a bed to sleep in.

Poor Mrs. F. was in trouble indeed. She possessed but one bed and I was in possession of that, but she was equal to the emergency. She first brought Charley and another fellow up to my door, (she had no light,) telling them "ye can shleep in there, me honeys, but come down and take something before ye turn in." This was repeated with five or six couple more, and I wondered whether they were all for my quarters, or whether she had other apartments. Presently I heard her and the ould man whispering in the hall. Ah, it will not hurt em, sure, if they leave the house every pinny will be spent some where else. That's so, said the old man, and bad scran to that fellow in our bed. Where will we shtow ourselves? Och, never mind that. You go open the dure and I'll get 'em up.

They left and I wondered what was to come next. She returned with two or three sailors, saying, "Go ahead, boys, shtrate, now there's the dure. Go an now." I heard a grunt and a thud, another, then another, then a cry of pain, until finally there were harsh words used, and blows were being freely given. One accused the other of hitting him. I rushed to my door, when I met Mrs. Fitz. Och, shtay thare, me darlint, they wont hurt aitch other. I was just puttin' them to bed.

The old man came now, leading three others, who were advised to "go ahead, there's the dure in front uv ye."

There was no light except from a tallow candle which Mrs. F. held.

The poor sailors went ahead and suddenly disappeared among those who had already been decoyed, and in their delirium were soon mingling in the brutal work going on. The old dame now rushed down stairs screaming, and och, murther, boys, come up, they are murtherin' aitch other up there in the bedroom.

Up came all hands, Charley at the head, yelling "where are they?" "Och, go an, me darlint, there's the dure in front ov ye."

A moment and they likewise had disappeared, and by their numbers only added to the uproar, by taking part in a row among their own friends, all alike maddened by accursed liquor. In the meantime I had slipped on my clothes, and now, as I stood by the "dure," beside Mr. and Mrs. Fitz, each holding a tallow candle, I beheld below me the state of affairs, and although it was somewhat of a serious matter, I could not restrain myself, and laughed until the tears streamed from my eyes, and my very joints were sore, and my hosts were in convulsions of laughter. There up to their middle in hay, about fifteen or twenty feet below us were the twenty-five liberty men, plunging, striking, swearing at each other, each blaming the other for hitting him.

I could understand it all now. The door "shtrate in front of ye," which I had previously noticed, opened into the hay-shed where the cows were stabled. Of course, as soon as a fellow stepped through the door he dropped below into the soft hay.

But the next one who stepped in fell on the first lodger, and so on, and as all were stupified by their night's revel, each one imagined he had been struck by an enemy and attempted self-defence. Every new comer only added to the trouble, which soon grew into a brutal affray in the dark, among friends.

Mrs. F. advised me to go back to my bedroom as it was nigh mornin',—said they would fight themselves to sleep soon,—then called the ould man, stating that they would go down and clean up below. Thus ended one of those disgraceful scenes, caused by dram drinking which we trust may soon be wiped away.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 9.

BY J. H. T.

BRONZES. *Brass dust.*—This is commonly called gold dust; the best, which generally comes from Germany, is that which is the brightest and most like gold color, which is to be perceived by taking a little of it between your finger and thumb, and rubbing them together; if it be good, it will be of a bright, rich, golden lustre; if bad, it will be of a dull, clayish color. The coarser sort will work well with gold size, but not with gum water.

Silver dust.—The best of this comes from abroad, having a lively bright lustre, like that of polished or bright silver newly coined, which is to be perceived by rubbing it between your finger and thumb; whereas, the poorer sort, which generally comes from England, is dull, dead and heavy, more fit for a color than a metal; the difference is easily perceived by comparing them together—the poorer sort, in fact, is worth nothing.

Green gold dust is an adulterated or mixed metal, casting a kind of dead, greenish color. This is generally used by painters, in garments, flowers, houses and the like, making the work more beautiful and surprising.

Sullied or dirty-colored gold dust is also a kind of adulterated metal, bearing some resemblance to drossy gold, and is used for the same occasions as the former.

Tin dust, or powder, is made of block tin ground to powder, and is of a dull, dark, but silverish color; it is used in rocks, &c.

Natural copper dust is made of copper, ground, without any mixture, to dust. This is the true natural color of copper.

Artificial copper dust.—This exceeds the natural, and is more deep and red, but very clear, and of a bright shining color, and shows how far art can outdo nature. The artificial is dearer than the genuine.

Adulterated copper dust is of a thick, heavy, dull, metallic color, and commonly used to work other colors or metals on; for, being laid as a ground, you may hatch or heighten with bright gold or other shining metals.

The iron work of carriages or sleighs look well when bronzed with good dust, the easiest and quickest way of doing which is as follows: Mix up your dust in a small cup with a very little varnish, "but be careful not to have too much varnish, as it will turn it of a greenish cast," then with thin spirits of turpentine, and with a short camel's pencil, apply to the iron work.

If any of my friends in the paint shops have not measures at hand to measure liquids, they can follow the following plan:

Sixteen large tablespoonsful are half pint.
A common sized tumbler holds half pint.
Four large tablespoonsful are half gill.
A common sized wine-glass holds half gill.

J. H. T.

A POLITE philosopher once thanked a lady who had been singing to a party for an hour, by saying, "Madam, you have wasted our time charmingly."

MRS. JENKINS complained in the evening the turkey she had for thanksgiving did not set well. "Probably," said Jenkins, "it was not a hen turkey."

PENCIL RULE & SQUARE

D. BOARD EDITOR

PART ELEVENTH.

BY A PRACTICAL CARRIAGE ARCHITECT.

Cant of the Four-in-Hand Drag, ¾ Scale, giving Manner of Construction.

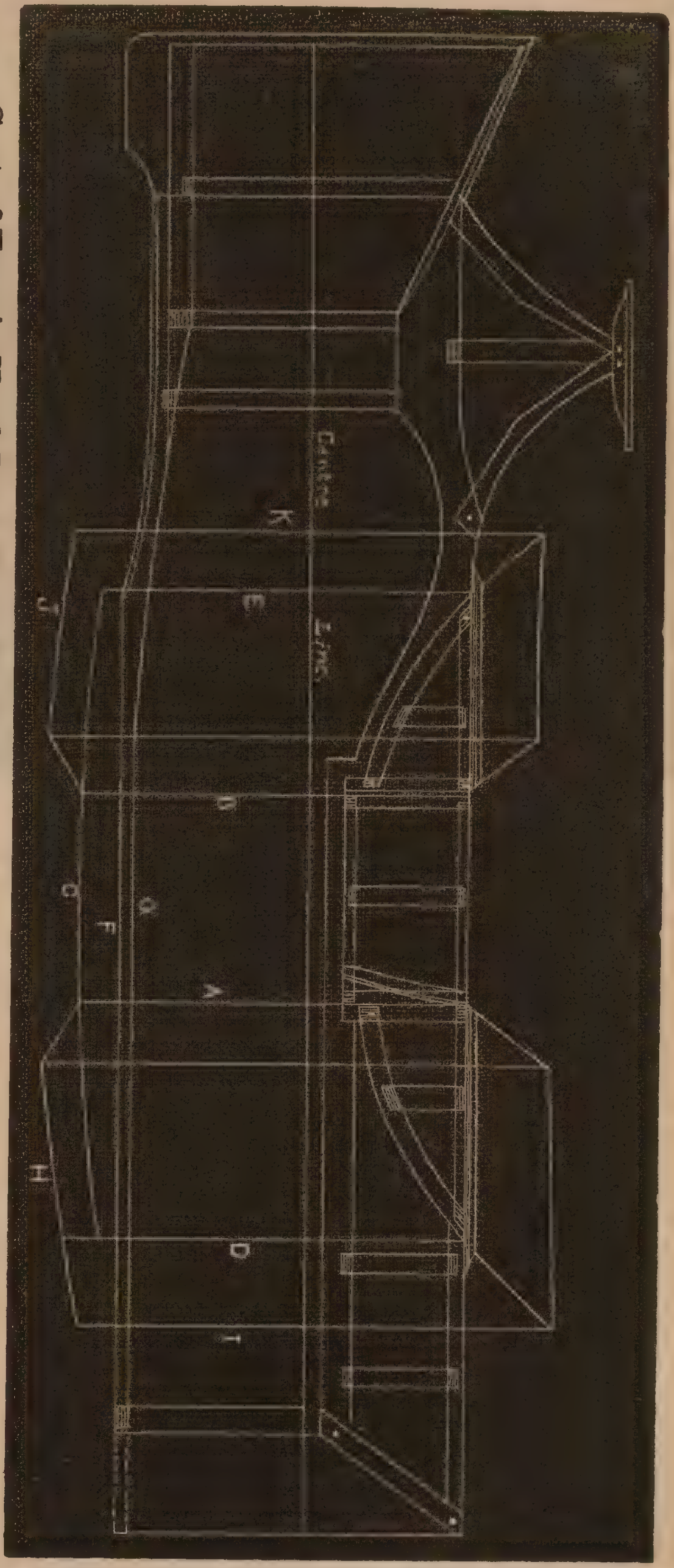
This drawing represents side elevation and cant, and is given in a manner entirely new, as will be readily seen by those who have paid close attention to instructions heretofore published. We have concluded to insert this, and in so doing we are compelled to lay over the scale drafting, which will, however, be continued in future numbers.

The side elevation is drawn to the ¾ scale, and the manner of framing shown, with short bottom sides framing into the lock and hinge pillar, the door shutting against the rocker. Panels put in a groove, with deep chamfered mouldings. Proceed by laying out the cant or working draft, by drawing the centre line, and also by squaring lines *a* and *b*.

Measure twenty inches from centre line on lines *a* and *b*, and prick it off, which establishes two points on line *c*. Also half the width of the body, which is 40 inches wide. Square lines *d* and *e*. Also draw line *f*. This line is established from the points of line *c* by taking the space of the turn-under and depth of pillar, and prick it off from the points of line *c* on lines *a* and *b*. This line has been often explained heretofore in the French Rule given in the JOURNAL, and, as it must now be well understood, we pass it.

Measure on line *d*, from line *f* two inches, and prick it off, and also on line *e* from the same point. This establishes the four points of line *c*. This line can be swept with an easy sweep, as shown in the diagram.

H and *k* shows the side flare of seats. This flare is obtained by the width required for the bows, which is here laid out for 48 inches. The bows decrease in width, following the variation of the seat line. The seat being narrowed behind, the bows should be arranged accordingly, thus producing a top in harmony with the swell of the seat, which are of the French pattern, with square corner. *I* and *k* shows the back and front flare, and *g* the face of the rocker. The front is laid out for 28 inches, having a slight concave; also shows the manner of finishing the toe board.



Cant of Four-in-Hand Drag, Plate No. 11, 3-4 inch Scale, giving manner of Construction.

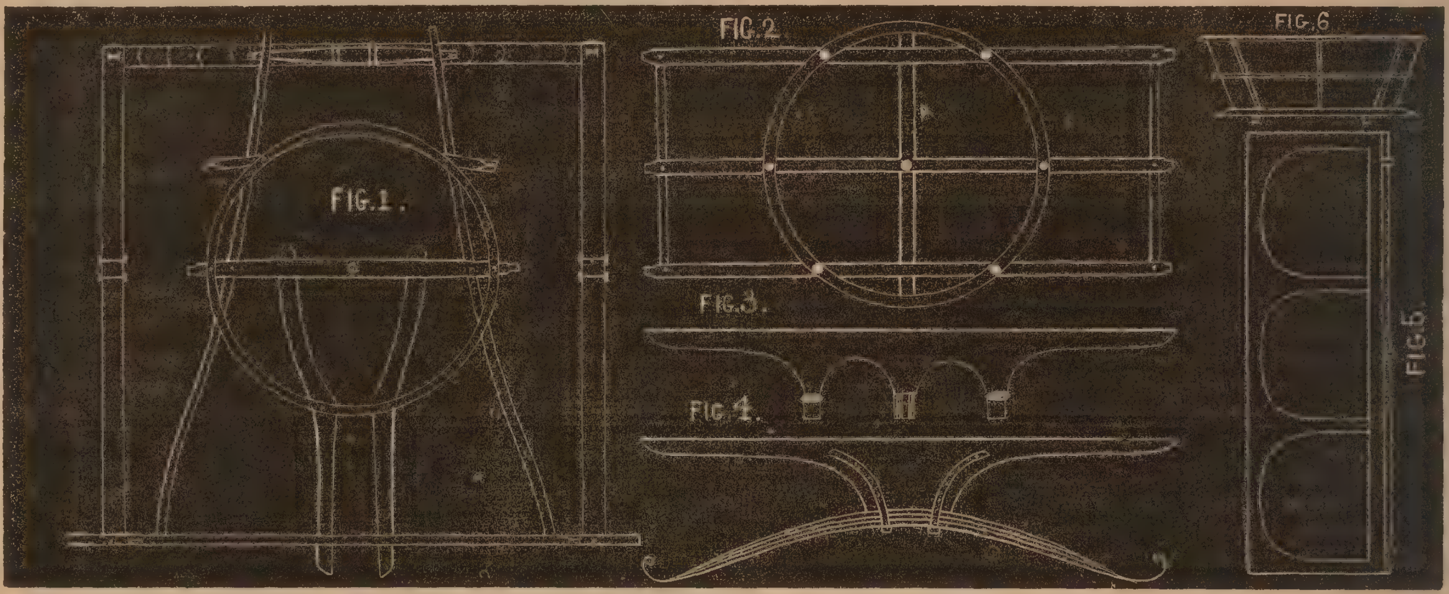
THE TOP

May be made either shifting or stationary. The stationary top has a high wooden back, secured to the seat in the ordinary way. It is 22 inches high from the top of the seat frame, and arched, with wooden arm pieces, to which the trimming is attached.

The shifting top has the back and arm pieces secured to the rail by iron stays, which admits of the whole being removed when required; an extra back to be used for a no-top presentation of this vehicle, fastened to the ordinary eyes.

For rocker plates use 2½ by ½ inch, and 2½ by ⅜ Bessemer steel. Half-inch steel should be used in the doorway, running to the neck and any other weak points, but where panels help to stiffen the work, use ⅜ inch steel. Turn a corner plate on to the back bar; this plate to be secured by No. 20 screws.

We have heard some objection to the use of Bessemer steel for the purposes named, but where it has been used of a proper temper and sufficient weight, it is superior to iron, in that it may be worked lighter than iron, and still contribute the requisite stiffness.



Rocker plates often fail to support the rocker because they are not properly bedded in white lead, and securely screwed. The holes should be drilled to the exact size of the body of the screws, and the heads sunk to the level of the rocker plate. The screws should be, say four or four inches and a half apart.

(In this connection, we would call attention to our correspondent from Toronto, Canada, in this number of the JOURNAL. He is an English smith, and his opinion is based on actual experience.

Messrs. John A. Griswold & Co., of Troy, New York, whose advertisement may be found in the back columns of the JOURNAL, are prepared to furnish the different qualities of steel required by mechanics, and may be addressed as above.—PUBLISHER.)

PLATFORM CARRIAGE, PLATE No. 13, FOR POLE AND SHAFTS.

Fig. 1 represents the lower part of front platform, with springs attached. The circle measures 24 inches in diameter. Short furchels are framed into the bed to receive the pole. Long furchels on the outside run back, and are clipped to the cross-spring bar.

The side spring measures 18½ inches long from centre, and 22½ front from centre to splinter bar. The single-tree for shafts is attached to the splinter bar, and when the pole is used the single-tree is removed, and the double-trees or bars are attached.

Fig. 2 shows the top part of carriage having three cross bars, which are 18½ inches from out to out at the ends. Bar *a* rests upon the fifth wheel, and supports the three cross bars before mentioned.

Fig. 3 shows a front view of the bars, with turned collars, which rest upon the fifth wheel, the centre leg resting on bar *a*.

Fig. 4 shows the back view of hind cross-spring and bar attached, which is bolted to body under the tail-board.

Fig. 5 represents the tail-board, which is laid out in three panels.

FIG. 6. End view of seat, which rests upon the top rail of the body, but is not shown in the fashion plate given. The seat is framed, the slats being ½ inch square, and paneled on the inside. Iron guides on the outside of the seat frame steady the seat in its motions, which are shown in the figure.

CHICAGO, ILL., Nov., 1869.

MR. EDITOR:—I subscribed to your JOURNAL in the middle of last volume for one year, and as I am anxious to learn all I can, I want to ask D. Board a question. I am studying the scale drafting, and wish to know what kind of wood is best to make the sweep patterns out of. This may seem to be a simple question. I can't help that, but will promise not to trouble you often. Yours. J. B. W.

ANSWER.—We answer all question cheerfully to the best of our ability, and although we might refer you to the August No. Vol. 4, page 169, and lighten our own labors somewhat. On a second thought we will repeat what we then stated for the benefit of those who began their subscription with No. 1 of this volume.

"The patterns for body designing should be taken from pear-wood veneer, or fine grain apple-tree. The pear-wood being preferable for its fine grain, and is not liable to split." It is absolutely necessary to have a clean smooth edge on the sweep pattern, which cannot be obtained by the use of rosewood or any other coarse grained veneers. If the edge varies by being crossed with the grain, the trace of the pen will show an imperfection which should be avoided.

This degree of nicety might not be apparent to the generality of persons, but should you be required to delineate for the engraver, whatever imperfections of line were on the block would be left, and the "proof" would plainly show the defects.

Irregular sweeps are also made of horn, which presents a true firm edge, but the body designer should provide himself with veneers, and from his own sweeps, for there are lines to be drawn, which cannot be obtained in any other manner.

Having seen it stated that rosewood should be used for making irregular curves, we have taken the pains to inquire into the matter and find on inquiry at the stores that it is not used.

I am very sorry that my request was not received at the office in time for No. 2 JOURNAL. My request was, that so much as referred to by I. A., of Middlebury, Vermont, as appears on pages 138 and 139, be republished for the benefit of the new subscribers. I. A. says "he has no sympathy with the idea of the expansion of the tire, and would not excuse his wheeler for the failure of his wheels, and lay the blame to expansion." I. A. has very kindly extended me an invitation to visit the shops of the Green Mountains. While I would be pleased to grant his request, I do not think that it would in the least change my opinion as to the facts of expansion; it may not be amiss for me to say that I was not considering upon the basis of a stone or lumber wagon. I had reference to light carriage work. I was not fault-finding with men, it was the principle of setting the axle, and the effects of the same on the wheel. Upon this point I. A. has done me injustice—only for a time I suspect. What I said as appears on pages 138 and 139, as referred to by I. A., is a fact beyond all question, and I am astonished that I. A., as a coach builder, has not discovered the same; and I wish here to put the question direct to him, and shall request that he will furnish the readers of the JOURNAL with his answer at his earliest convenience. Set your axle five inch swing, or that much wider across the top than what it is across the track; this gives us 2½ to each wheel off a perpendicular line. Does I. A. contend that the tire wears on the inside of the tread and not on the outer edge, as held in my communication on pages 138 and 139? The question of expansion is the point to be discussed between us. I hold that it does expand, and as evidence I will submit what I know to be the facts in the case, and I hope that I. A. and all others concerned, will, for their own satisfaction, try the experiment. Set your axle five inch swing on the wheel; your tire is one inch by ⅛ thick; give your wheel ¼ dish; the same is to run in the city or stony road for twelve months; you will find that your dish is run out. Remove the tire, then take two short pieces of tire steel, and place them immediately opposite each other; you will place them fair on the inside of the tire, and with a straight edge measure on each side of the tire, and you will find the outer edge the largest; as a proof of the effect heat the tire, give it the draw you desire, and put it on the same wheel, and you will find that your wheel inclines to draw back instead of front, provided you do not use the press on the hub for the purpose of getting your dish. You now have your tire on; take the same tire off and reverse it, throwing the front edge on the inside and you will find that your wheel will come to the front without any effort on your part.

"Victim" informs me that the children are waiting for me to make good my promises. I am pleased to inform "Victim" that he is *muchly* mistaken in his supposition that I have never made any wheels. I have been working at the business twenty-two years, and I expect to continue until old age forces me to retreat. Boiled hubs still continue to be his theme. He seems to be very desirous that I should explain how boiling is injurious, and steaming beneficial to hubs. As the children are waiting I must lose no time—so to the question, as I understand it. In doing so I cannot instruct "Victim" as to the effect of five minutes boiling, being as HOW he has experimented to his satisfaction, notwithstanding what I may say may fall by the way-side and prevent others from being similarly victimized. The effect of boiling the hub is to my mind very injurious, both to the hub and spoke. When you boil your hub the whole body becomes saturated with water, consequently it takes it a long time to dry out, and when it is thoroughly dry then the hub commences to dry-rot. This fact is apparent to any one who knows anything of the nature of gum. The effect on the *spokes* is more serious. Imagining the hub is boiled five minutes, the spoke is as dry as possible to have it, and you drive your spoke in; being dry, it absorbs dampness and remains the same as the hub. The tenon being small and of hickory is thereby rendered worthless, for it is the nature of this wood to lose its strength when exposed to dampness after being thoroughly seasoned.

I must repeat that I never "*boiled* a hub." So, whatever I may say with reference to it is mere speculation on my part. I should think that a hub, after having been filled with boiling water, would, when it again became dry, be not only harder, but the sizes of the mortises also be reduced.

I hope "Victim" will give the readers and myself the benefit of his experience on this point, he "having been there."

How *steaming* is beneficial I will endeavor to show, giving my every day practice. What *I* understand by *steaming* is ("having been there,") as follows:

When preparing to drive the spokes, I have in the water kettle a strip of thick canvas, say four or five inches wide and four feet long, which I allow to remain in the boiling water while fitting the spokes to the mortises.

When I am ready to drive I take the cloth and wrap around the hub, the steam from which penetrates and softens it. I allow it to remain around the hub two or three minutes until the cloth begins to cool. This is all *about which* "Victim" has said so much.

There are other points in his communication I will refer to at a future time.

For the Coach-Makers' International Journal.

MANNER OF DRIVING SPOKES.

Fearing that Spoke Shave's bears may not come to their appetite in time for the next number, and not wishing to see an entire blank on the subject of wheel-making, I will submit a few lines. I presume, however, I need have no fears, as we have the promise of publisher that he will do his best to prevent the failure. If they are clyed I would recommend *raw* potatoes.

I would like to rake over the subject of wheels becoming rimbound, &c., but Spoke Shave's invitation was only to abler exponents than himself, consequently he did not intend it to extend to me, so I must steer clear of that subject.

It is the common practice among wheelers to drive their spokes in a horse similar to the one in the cut heading the wheel department. I think a better way is to put the hub in the wheel-horse and shape up the mortises, bringing them all to exact size, as no machine-mortised hubs, that I have ever seen, are mortised exact enough to put the spokes into without some trimming. As the tenon should have considerable more squeeze at the end than at the shoulder, it is necessary that the mortise should slant towards the front more than the amount of dish that is desired in the wheel, or so that a pattern made straight on the face and tapered to the exact size the mortise is desired, when inserted in the mortise will stand dishing more than it is required to have the wheel. In the same proportion that the mortise is tapered more than the tenon, the extra squeeze at the end of the tenon would all come on the back side if the spoke were forced into the desired position, and the wheel, when put to hard service, would be likely to run its dish out, a difficulty that has been referred to by others. Machine-mortised hubs are apt to be mortised a little under on the face, owing to the chisel's springing on being forced into a hard hub. A man that drives his hubs without looking well to the mortises, ought not to be surprised if the dish does run out of his wheels. When the hub is ready to drive the spokes, place it on the riming horse, put on the face gauge, and screw it down only tight enough to hold the face gauge in its position, then proceed to drive the spokes, being careful to furnish the mortises well with glue, and it will be found that a less number of blows and lighter ones will send the spoke down than it would require in the wheel-horse, and the liability to spoil a spoke in driving be diminished. The principle is the same as it would be in driving a handle into a blacksmith's hammer. We would start it in, then hold it up clear of everything and strike on the end of the handle. The hub being held loosely on the riming horse is nearly the same as if it were swinging in the air. Try it, you who never have, and if you find that you have received any benefit from the above you can chalk it down to the credit of the JOURNAL, and I remain, as ever,

Yours, truly, VICTIM.

CARRIAGE PART ON C AND PLATFORM SPRINGS WITH IRON PERCH.

A carriage part on eight springs is the most complicated job of all similar or plainer jobs, and it would take up a great deal of space and time to describe it minutely; we have shortened the task without neglecting to give a full description of the principal parts of both wood and iron work. The hanging and ironing of the body shall be explained in our next number, and as we neither presume to be without errors, nor entirely comprehensive in what we say, we hope that some brother mechanic will favor us with a critic, for which we extend our most hearty invitation.

The length of the reach is generally 7 feet 10 inches between the axles, and for the sweep we refer to page 251, Vol. III. The thickness 1¾ inches, and height 2 inches, are pretty near maintained all along the reach, with the exception at the end, where it tapers down to ¼ inch.

The front springs are 20 inches, and the hind ones 21 inches apart; the platform springs are with a solid top or dummy, finished oval.

Fig. 1.—Front Carriage Part (Lower) Top View.—The fifth wheel 1½ inch wide, 7-16 inch thick, is bolted to the futchels, which are of the same dimensions, as in our last No., only longer, viz: 30¼ inches from front end to the middle of the bed, and 13 inches from there to back end. The lower bed is 2 3-16 inches wide in the centre, 1⅞ inch at the bottom and 1½ at the top. The top plate 5-16 inch, ends at the rest of fifth wheel; the bottom plate ½ inch thick, runs the whole length of the futchel. Stop *a* arrests the turning of the fifth wheel at nearly a quarter turn by the closing in of shoulder *bb*, on upper fifth wheel, Fig. 3. As then the act of turning commences, the carriage describes a circle, twice the length of reach from centre to centre of axle, the width of track counted in.

Fig. 2.—Front View of Lower Bed.—The curve of the bed is 2¼ inches from straight line *c* to bottom plate. The height of bed is 2⅞ inch in centre, socket or rest *dd* for fifth wheel ⅝ inch high, and in line with the middle of top plate ½ inch thick, with a thimble *e* 1 inch by 3-16 inch thick, fitting tight into a like one, let in the lower plate of top bar.

Fig. 3.—Front Carriage Part (Top) Top View.—The width of top bed is 2¼ inches in the centre, and 1½ inch at the end. The back bar is 1⅝ inch wide in the centre, diminishing slightly towards the end; plates bolted to top and bottom clear through. This bar rests on the top of the reach, and has a strong stay 1 inch thick and ⅝ inch wide, (see fig. 5, front view,) bolted to the bottom of the reach, while the bottom plate of the bar is secured to the top of reach; for this end the reach has two short cross plates welded to top and bottom for the reception of the bolts, fastening the reach to back bar and stay. At the end of the bar, and right under the middle of the C springs, passes a straight stay to top bed, keeping them firm and receiving the bolts for the lower end of the C spring. The fifth wheel, 24 inches in diameter, is fastened at the back by a clip fitted around the reach; the front part of the wheel connects by a bolt passing through a roller with the puncheon. Top bed, front view, Fig. 4, is 2¾ inches high in centre, 2⅝ inches where the fifth wheel passes, and is bent up 3½ inches from a straight line to the end of top plate. The back bar, Fig. 5, is 2 inches high in the middle, and 1¼ inch at the end.

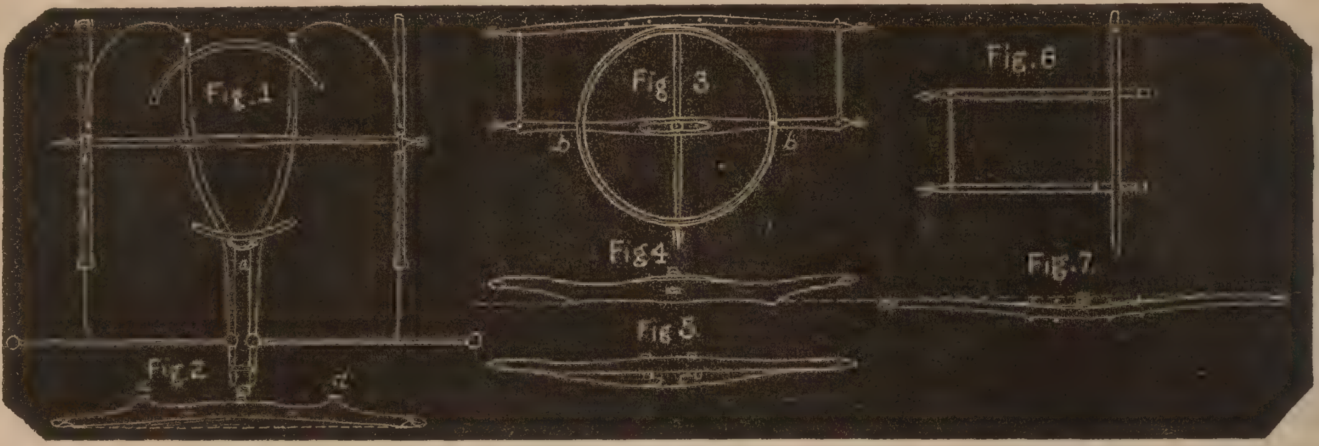


Fig. 6—Hind Carriage Part, Top View.—This consists of two straight cross bars for the support of the back C springs. The straight stays, as on the front carriage, are bolted underneath the ends of the bars, keeping them square. These bars are 1⅝ inch wide, with ½ inch plates, clear through. Height of bars 1⅞ inch.

Fig. 7, front view, shows the curve of 1⅜ inch from a straight line at the top. The reach rests on the top of the bars and is bolted to the top plate by short cross plates welded to the bottom of the reach, which latter is perfectly straight to within 8 inches inside of front cross bar, and thence swept to follow the bottom side.

For the Coach-Makers' International Journal.

Toronto, Ontario, Nov. 1, 1869.

Mr. Editor:—In reference to J. W., of New Haven, I wish to say a few words. In the first place, I think "Bessemer" steel the best material for rocker plates for any carriage, and more especially for such as landaus, where the points of bearing are so wide apart, and hung upon platform gearings or carriage. I have seen the above steel used in England with the greatest success, the size used being generally 4 inches by ⅜, although in some bodies 3½ by ⅜ inch would do as well as 4 inches by ⅜ would in others. It depends greatly upon the style of body in one case, and the construction of the rockers in another. Some body-makers, either from a want of knowledge or care, make the splices too near the door, so that all the strain is on the plates, instead of the rocker bearing its fair share of the work.

Then, again, it is an easy matter to have a good pair of plates spoiled in the drilling. The greatest care should be taken to have every screw and bolt to fit the holes in which they are placed. For, if the holes are too large, the consequence will be that, as soon as the carriage gets into wear, it will naturally drop until the screws get a bearing, and by that time the doors will not shut; and purchaser, as well as builder, if they have not studied the subject, think the plates are not strong enough.

In the second place, I may say that nine-tenths of the carriage builders in every country use iron at the present time. I made a pair not long since 4 inches by ⅜ along the rockers, gradually getting thicker and narrower toward the centre of the arch, in which place they were 2 inches by 1 inch, and would not recommend anything lighter. It is better to curtail the weight in some other places than to do it in the plates.

A Toronto Blacksmith.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 26.)

COMPOUND COLORS, OR THOSE COMPOSED OF TWO OR MORE COLORS MIXED TOGETHER.

The carriage painter is not required to produce a great variety of colors, hues or tints, the panel colors being generally of the proper shade without any addition, and when a change is required, for bodies, especially, it results from simple mixtures, such as have been noticed in preceding numbers. On carriage parts, of late years, there has been a run of drabs, and umber-colored browns, which have called on the painter for the exercise of an unusual amount of skill in their mixture, and the mixture of striping colors to harmonize. *Some* beautiful effects have been produced, while a *great many* glaring and offensive combinations have annoyed sensitive eyes.

As there cannot be the slightest mixture of any two or more colors, without producing a change of hue, it follows that there is no limit to number of hues and tints which may be produced. But as only a certain class are acceptable to the eye, the painter need use only a good selection.

Normal or pure gray.—White and black in various proportions.

Colored grays.—Red and green, blue and orange, and red, yellow and blue.

Straw color.—White, chrome yellow and raw umber; white, yellow ochre, vermilion, and raw umber, or white, yellow ochre and vermilion.

Light buff.—White and yellow ochre.

Deep buff.—White, yellow ochre and red.

Salmon color.—White, yellow and vermilion, or white, yellow, vermilion and lake.

Flesh color.—White, Naples yellow and vermilion; white, raw sienna and light red.

Orange.—Equal parts of red and yellow.

Gold color.—White, yellow, red and raw umber, blue or black.

Pearl color.—White, black and vermilion, or Indian red.

Lead color.—White, blue, and small portion of black.

Stone color.—White, yellow and umber; black, umber and yellow.

Canary color.—White and chrome yellow.

French gray.—White and drop black.

Tan color.—Burnt sienna, yellow and raw umber.

Linen color.—Black and white, warmed with umber in the shadows, or heightened with yellow and reds, where in the painting any part should approach the skin.

Pea green.—White and chrome green.

Sea green.—Prussian blue and yellow, Prussian blue and Dutch pink, Prussian blue, yellow and Dutch pink.

Citron.—Green and orange, or which is the same, yellow, blue and red—green being formed by yellow and blue, and orange by the mixture of red and yellow.

New York red.—Carmine and vermilion.

Chocolate.—Black and Spanish brown.

Umber-toned drabs.—White, raw umber, lemon, yellow and lake; white, burnt umber, and orange chrome; white, umber, yellow, red and a little black.

Olive.—Umber, yellow and black; raw umber and yellow; green, umber and yellow.

London smoke.—Burnt umber, yellow, white and red; Vandyke brown, yellow, white and lake.

Lilac.—White, carmine and ultramarine blue.

Purple.—Ultramarine blue, whiting and carmine, blue and red.

Violet.—Blue, red and black; or blue and red.

Wine color.—Purple lake and ultramarine blue, lake blue and black.

Bismarck.—Burnt sienna, yellow and lake; Dutch pink, burnt umber and vermilion; Dutch pink, umber, yellow, and vermilion or lake.

Dark rich brown.—Vandyke brown, burnt sienna and lake.

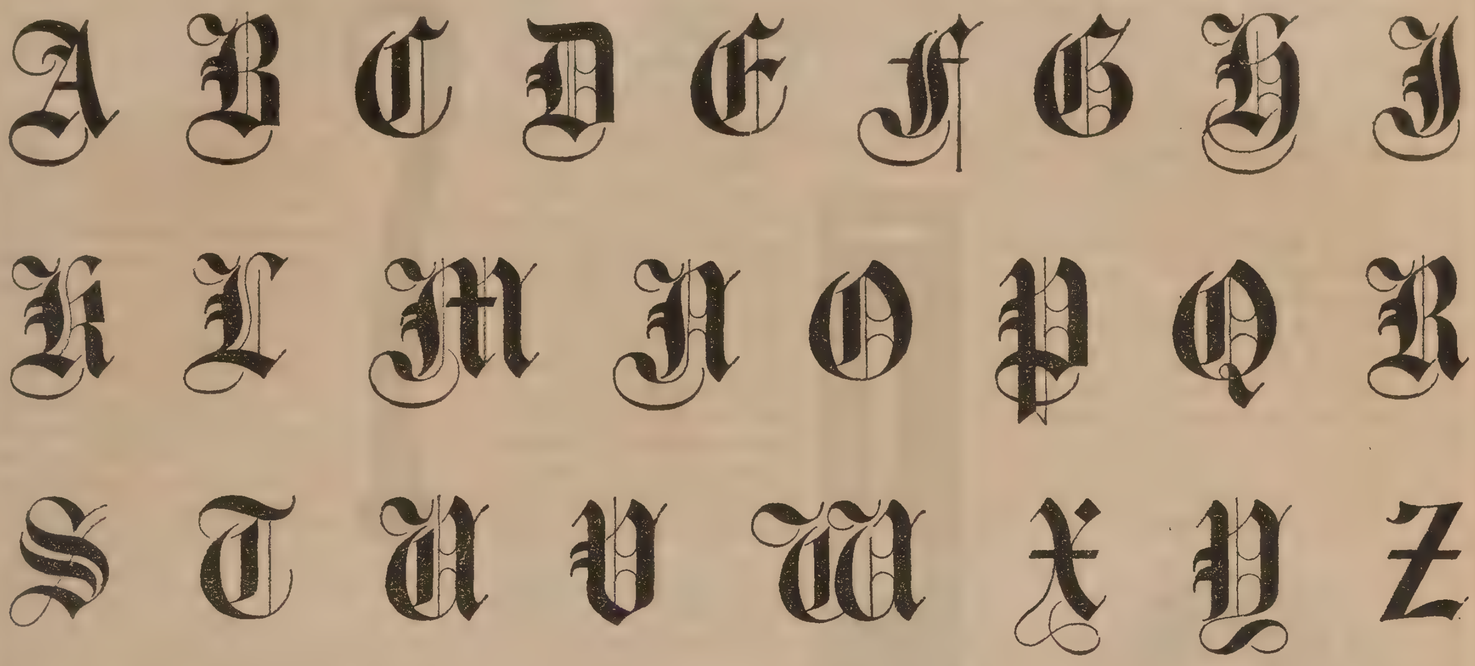
Green.—Blue and yellow, mixed in different proportions, give an endless variety of greens; drop black and yellow produce a green well suited to heavy carriages.

Changeable color.—Clear Prussian blue; it must not be color and varnished.

Maroon.—Carmine, yellow and burnt umber, or crimson lake and burnt umber.

The foregoing list will enable the painter to mix up about all the colors required in coach painting. A great many shades may be made of each of those given, and combinations formed which will be acceptable. The fashions do not always allow the painter to use colors that may be to himself most pleasing, and he is often pained by an order to paint and stripe a carriage with glaring and raw colors; but these coarse effects soon grow into disrepute, and we find that on the average the colors used by carriage makers are in good keeping.

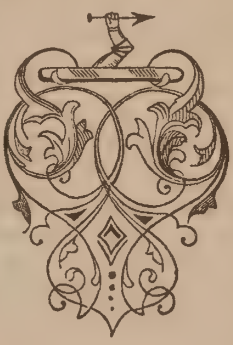
GERMAN TEXT.—This alphabet will be found useful to the carriage painter, as he may often be called upon to put on initials.


A B C D E F G H I
K L M N O P Q R
S T U V W X Y Z

I and J, being the same, will account for there being but one letter between H and K.

They may be surrounded with delicate penciling, which may add somewhat to their beauty.

SCROLL ORNAMENT.—This pattern is simple in design, and will be easily executed by those who may have acquired a free use of the *cutting-up* pencil. It is of a triangular form, and drawn by the use of the circle and oval. It may be used as given, or reversed by leaving off the crest. One-half of the scroll part of the ornament, taken lengthwise, may be used for spring-bars, head-blocks and axle-beds; as a whole, it will suit for the flat face of the under part of the spring. It may also be divided, and arranged to suit the corners of panels.



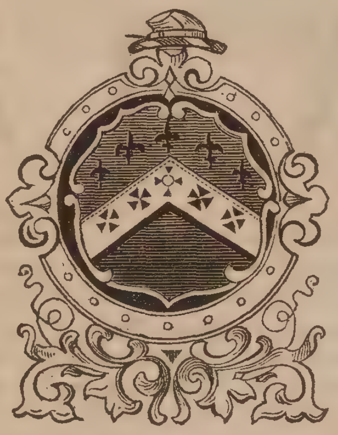
Lay in all gold, separate the parts where required, and produce the effect of interlacing by a judicious use of light and shade. The pencil best suited to this class of ornaments is a fine *cutting-up pencil* an inch long. Having traced the pattern on the panel, commence by painting the crest, next the main upper left hand division of the scroll part, paying no attention to the leafing or any minor details. It will be noticed that the centre line of the heavy leafing is a part of the scroll line which passes from the wreath or ribbon at the top, and is completed at the base, so that, to secure easy curves, this line should be laid in through its whole length, and the leafing, or any minor dividing lines be governed by it.

Next lay the other half in the same manner; having secured these main curves, add the details.

Where two fine lines cross each other, the effect may be produced of one passing under the other by simply lighting one of the lines across their intersection, which, by contrast, makes the gold appear darker, thus forming the shade required.

Paint the wreath blue and white, the crest to be merely lighted with the color used for high lighting the other parts.

Coat of Arms—Suitable for door panels on heavy work, or the back panel. We notice that it is becoming fashionable to ornament the back panel with the same coat of arms used on the doors.



In painting this style of ornament, select dark rich colors, which can best be secured by glazing.

The cap crimson, wreath green and gray, lighted with a delicate pink.

The circular part gold, shaded with asphaltum tinted with carmine; also, outside border of shield gold, upper division of shield red, dark and rich in tone, instead of a staring light red such as clear vermilion gives. Chevron white, not pure white, but a delicate gray, lighted with clear white. The lower division blue, the deep shades of a purple hue.

The leafing at the base paint with a color mixed of burnt umber, yellow and lake; shade with asphaltum, tinted with carmine; high light with orange or vermilion.

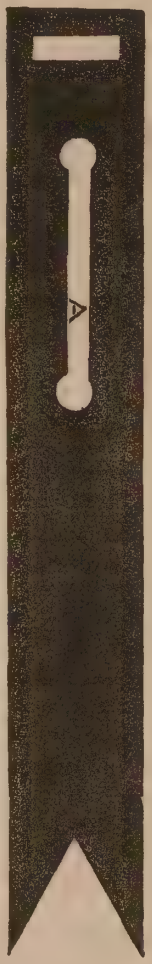
"Can any boy name an animal of the order edenta—that is, a front-toothless animal?" A boy whose face beamed with pleasure at the prospect of a good mark, replied: "I can!" "Well, what is the animal?" asked the teacher. "My grandmother!" replied the boy, with great glee.

Old Shafer, of Prairie Ronde, reports a very fair growth of corn this season. He states that in July it was so dark between the rows that he was obliged to carry a lantern to see to plow it out.

SHEARS, NEEDLE & TACK HAMMER

T. ACKS EDITOR

A VERY NEAT STYLE OF MADE CLOTH LACE.

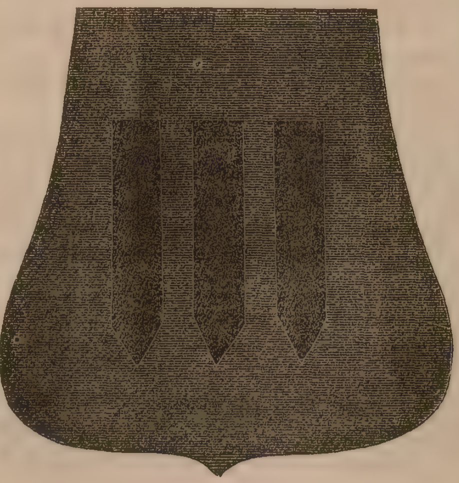


This lace shows a very narrow patent leather rubbed-down welt on both edges. The lace can be made in two ways: first, by doubling over a piece of collar leather, and pasting it to the desired width; then double and paste a piece of cloth one-half inch (scant) narrower than the doubled leather; paste the cloth on the leather, and line the back with a single ply of cloth; this will show a cloth lace with a neat narrow patent leather edge; when dry, stitch two rows on the cloth.

THE TASSELS

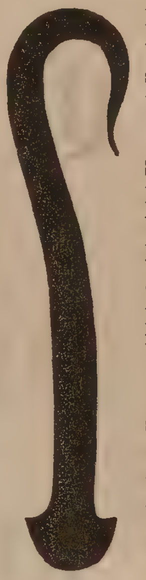
Are made any fancy shape, such as the shield pattern shown. They may or may not have the patent leather edge, but should have three raisers in the tassel. The tassel is sewed to the lace, and the seam is then covered with a doubled strip of collar leather, rubbed down to three-fourths of an inch wide, and the edges double stitched.

The second way of making the lace is, to use two ply of buckram, or a strip of common split leather; then to paste strips of rubbed-down collar-leather welt on the edges, and cover with cloth as before; but the tassels are made in the same way.



THE GUIDE STRINGS

For the door—glass strings—are simply seaming cord covered with collar leather, pasted on or sewed, and well creased; then, when dry, stitched, pared off, and the edge blackened.



THE DOOR FALLS

Should be finished with the lace, having a patent leather edge; but for the seat falls the patent leather may be dispensed with, and also may (should) be dispensed with for the cushion fronts.

MY CUSHION HOOK.

Insert the hook into the long slot marked *a*, and a strap into the other slot, and see how you will like it. The drawing is for the full size, and this will suit almost any cushion, high or low.

To be made of steel or iron.

Poetry.

For the Coach-Makers' International Journal.

DESPONDENCY.

BY MRS. J. T. GURNEY.

Faint, fatigued in mind and body,
  Down the street I wend my way,
Quite rebellious 'gainst the fate which
  Bade me labor day by day.

Life is bitter, hard and cruel,
  Thought I, with an inward sigh,
Nothing constant is but labor,
  And so tired, so tired am I.

Careless of my many blessings,
  Thus along the street I roamed,
Till a print-shop window near me,
  Gave my mind a higher tone.

Lovely forms and beauteous faces,
  Landscapes green, and statues rare,
All invited me to enter,
  And to view the treasures there.

Quite unthinking, then, I followed
  Close upon the busy throng,
Till I found myself, still sighing,
  In a picture-gallery long.

Rows on rows of painted canvas,
  But not one attracts my gaze
Like that idyl in the corner,
  Beside which all others pale.

'Tis a maiden tall and stately,
  Modelled with a Hebe's grace,
And her soul shines from the canvas,
  Through her earnest, speaking face.

In the land of ancient heroes,
  Land of woman's loveliest charms,
Standing by a well's stone margin,
  'Neath a widely spreading palm.

With her white robes clinging round her,
  Not a stirring breath of air,
From her gently sloping shoulders
  To her ankles white and bare.

Bare her arms of shapely contour,
  And her hands so perfect are,
You are half inclined to kiss
  The deep-indented dimples there.

Purely classic face and forehead,
  Dark and gently waving hair,
But her eyes, ye gods! what pathos,
  What expression lieth there.

Just one side, the well between them,
  O'er it bending, anxious he,
Is a youth of dark complexion,
  Yet a manly form to see.

In his eyes what eager quest'ning!
  And his lips how pleading they!
Will she never, never answer?
  Ah! her thoughts are far away.

She is thinking, pure and lovely,
  There may something better be
Than the love this youth doth offer,
  Earthly love as it must be.

Is there in her mind a dawning,
  Of that glorious future day,
When through all that Pagan land
  Christ'anity will hold its sway?

In her eyes methinks a longing
  Something better yet to be.
Is there in her soul a shadow
  Of her immortality?

Thoughtless, wicked, my repining,
  Was my inward comment there.
Could I not, in times of sorrow,
  Consolation find in prayer;

She, with freedom from hard labor,
  Lovely form and Hebe grace.
Was bereft of my great blessing,
  Hope of Heavenly resting-place.

So I turned me from the picture,
  Walked out through the open door,
Stricken through with shame and sorrow,
  Promising to sin no more.

BE EARNEST.

Be earnest in thy calling,
  Whatsoever it may be;
Time's sands are ever falling,
  And will not wait for thee.

With zeal and vigor labor,
  And thou wilt surely rise;
Strive ever with thy neighbor
  To bear away the prize.

But form thy purpose gravely,
  Then quickly push along,
And prosecute it bravely,
  With resolution strong.

Thou wilt not be defeated,
  But, pressing firmly on,
Find all at length completed—
  Thine object fully won.

Be earnest in devotion,
  Old age is drawing near;
An atom in Time's ocean—
  Thou soon wilt disappear.

Youth's Department.

A BRAVE BOY.

The New York *Sun*, in an article on "The Heroisms of Humble Life," relates the following story of a heroic lad:

"Two weeks ago a little ragged boy, aged nine years, was secreted on an English steamer, that he might reach his destination without paying his passage. On the fourth day of the outward voyage from Liverpool to New York, he was discovered and carried before the first mate, whose duty it was to deal with such cases. When questioned as to the object of his being stowed away, and who brought him on board, the boy, who had a beautiful, sunny face, and eyes that looked like the very mirrors of truth, replied that his stepfather did it, because he could not afford to keep him, nor to pay his passage out to Halifax, where he had an aunt who was well off, and to whose house he was going. The mate did not believe the story, in spite of the winning face and truthful accents of the boy. He had seen too much of stow-aways to be easily deceived by them, he said; and it was his firm conviction that the boy had been brought on board and provided with food by the sailors. The little fellow was very roughly handled in consequence. Day by day he was questioned and requestioned, but always with the same result. He did not know a sailor on board, and his father alone had secreted him and given him the food which he ate.

"At last the mate, wearied by the boy's persistence in the same story, and perhaps a little anxious to inculpate the sailors, seized him one day by the collar, and dragging him to the fore, told him that unless he confessed the truth in ten minutes from that time he would hang him on the yard arm. He then made him sit down under it on the deck. All around him were the passengers and sailors of the mid-day watch, and in front of him stood the inexorable mate, with his chronometer in his hand, and the other officers of the ship by his side. It was the finest sight, said our informant, that we ever beheld, to see the pale, proud, sorrowful face of that noble boy—his head erect, his beautiful eyes bright through the tears that suffused them. When eight minutes had fled, the mate told him he had but two minutes to live, and advised him to speak the truth and save his life; but he replied, with the utmost simplicity and sincerity, by asking the mate if he might pray.

"The mate said nothing, but nodded his head, and turned as pale as a ghost, and shook with trembling like a reed with the wind. And there, all eyes turned on him, this brave and noble little fellow, this poor waif whom society owned not, and whose own stepfather could not care for—there he knelt with clasped hands and eyes upraised to heaven, while he repeated audibly the Lord's Prayer, and prayed the dear Lord Jesus to take him to heaven.

"Our informant adds that there then occurred a scene as of Pentecost. Sobs broke from strong, hard hearts, as the mate sprang forward to the boy and clasped him to his bosom, and kissed him and blessed him, and told him how sincerely he now believed his story, and how glad he was that he had been brave enough to face death and be willing to sacrifice his life for the truth of his own word."

Remedies and Receipts.

Hens.—If their combs and legs are rough they are old; if smooth and limber they are young.

Geese.—If young the bill will be yellow and the feet limber. If old the bill and feet will be red and dry.

Squab Pie.—Cut apples in slices, lay them in rows with mutton chops, and sprinkled with shreds of onions and sugar.

Wafers.—One quart of flour, quarter of a pound of butter, two eggs, beaten, one glass of preserved quince juice and a nutmeg.

To make Castor Oil Palatable.—Boil castor oil with an equal quantity of milk, sweeten with a little sugar, stir it well, and let it cool.

Choice of Fowls.—Turkeys, if young, the legs will be black and smooth, the eyes lively and the feet pliable. If old, the eyes will be sunk and the feet dry.

Sweet Potato Cake.—Grate boiled sweet potatoes, and mix with an equal quantity of flour, four ounces of butter, and add salt and milk—cut out and bake in a hot oven. Slice and butter for tea.

Queen Cake.—Beat one pound of butter to a cream, with some rose-water, one quart of flour, one pound of sifted sugar, beat well together, add a few currants, washed, and dried-butter—small pans of a size for the purpose—grate sugar over them. They may then be baked.

Coffee Cakes.—Take some rice that has been boiled soft, twice as much flour as rice, a little fine Indian meal, and a little yeast. Mix it with cold water, and let it rise over night. This will make a very fine biscuit.

Crumpets.—Put half a gill of yeast into a quart of warm milk, with a teaspoonful of salt; stir in flour to make a good batter; set it in a warm place to rise. When light add a cup of melted butter and bake as muffins.

Lemon Cheese-cake.—Two eggs, well beaten, one-fourth of a pound of loaf-sugar, crushed, one-fourth of a pound of butter, a little lemon-peel, grated, or essence, and a few almonds peeled and bruised. Bake like tarts.

Duck Pie.—Bone a fowl and a full grown duck, wash them and season with salt, pepper, allspice and mace; boil a calf's tongue, pickled red, till tender, put it inside the fowl, and that into the duck; lay it in the dish, fill round with forcemeat, lay on the crust and bake in a slow oven.

A Missouri exchange recommends, from actual knowledge of its good effects, the following prescription for the cure of that terrible disease, cancer. Apply three times a day, with a common sponge, a wash made from a quarter of an ounce of carbolic acid mixed with a pint of water.

A gargle, made by dissolving a large tablespoonful of common salt in half a tumbler of water, has been found by trial to be an excellent remedy for dry hacking coughs and other throat difficulties that prevail at this season of the year. As it is harmless, it would be well to give it a trial.

Scraps of Humor.

Stockings are now darned by machinery, and they are darned nice.

The Height of Impudence.—Taking shelter from the rain in an umbrella shop.

Why is an errand boy like an old horse put up at auction? Because he'll go for what he'll fetch.

An urchin on being rebuked for wearing out his stockings at the toes, replied that it couldn't be helped—"toes wiggled and heels didn't."

An editor has placed over his marriages a cut representing a large trap sprung, with the motto: 'The trap down, another ninny caught!'

A correspondent says the following notice may be seen at a blacksmith's shop in Essex: "No horses shod on Sunday 'cept sickness or death."

An Irishman recently soliloquized: What a waste o' money to be buying mate when you know the half of it is bone, while you can spind it for rum that hasn't a bone in it."

Said a youngster in glee, displaying his purchase to a bosom friend on the sidewalk, "Two cocoanuts for ten cents? that will make me sick to-morrow, and I won't have to go to school."

Mrs. Partington says she did not marry her second husband because she loved the male sex, but just because he was the size of her first husband, and could wear out his old clothes.

"My son," said an anxious father, "why do you use that nasty tobacco? The boy declining to consider the question in the spirit in which it was asked, replied: "To get the juice."

An old lady being in a store at Waterbury, Conn., recently sat down and reached out her half frozen feet to the Herring safe, remarking that she "always did like those air-tight stoves."

"A DARKEY'S account of a sermon: "Well, sahs, de sermon was upon the miricles of de loaves and fishes. De minister said how der seven thousand loaves and de five thousand fishes divide between de twelve apostles; an' de miricle was dat dey didn't bust!"

"NOTHING can be well done that is done in a hurry," oracularly declared a certain pompous politician in New York, one day lately, on the steps of the City Hall. "How about catching fleas?" asked a wag at his elbow. The politician was floored.

"IT is a standing rule in my church," said one clergyman to another, "for the sexton to wake up any man he sees asleep."

"I think," replied the other, "that it would be better for the sexton to wake you up at any time a man goes to sleep under your preaching."

AN old soldier, whose nose had been cropped off by a sabre-cut, happened to give a few pence to a beggar, who exclaimed in return: "God preserve your eye-sight!" "Why so?" inquired the veteran. "Because, sir," was the reply, "If your eyes should grow weak, you couldn't keep spectacles on them."

A MAN inquired at the postoffice in Erie, N. Y., the other day, for "Enery Hogden." He was told there was none. "Look ere," he replied, angrily, "you've hexamined a hodd letter for my name. It don't commence with a haitch! It begins with a ho! Look in the ole that's got the ho's!"

A GENTLEMAN was about completing the sale of a horse, which he was very anxious to dispose of, when a little urchin appeared and innocently inquired: "Grandpa, which horse are you going to sell? that one you built the fire under yesterday to make him go?"

The bargain was at an end.

"WHAR is Europe compared to America?" said a Fourth of July orator. "Nowhar! Whar is England? Nowhar! They call England the mistress of the sea, but what makes the sea? The Mississippi makes it, and all we've got to do is to turn the Mississippi into the Mammoth Cave, and the English navy will be floundering in the mud!"

ONE day last week, says the *Demopolis Republican*, an individual of the African persuasion entered the office of the Probate Judge in that city, when the following dialogue ensued: "Is dis de place whar dey gits license fer to git married?" "Yes." "Well, I got married two years ago wid a license, and now my wife's done run away and leff me, and I want to git my name scratched off."

THE origin of the white man was recently the subject of the remarks of a colored preacher, and this is how he looked at that hitherto undecided point:

"Strate am de road and narrow am de paff which leads to glory! Brederen Believers, you awl sensible dis night in coming to hear de Word, and hab it splained and demonstrated to you, yes, you is, and I tend to splain it as clear as de liben day. We are all wicked sinners here below—it's fack my brederen, and I'll tell you how it cum. You see, Adam was de fust white man, Eve was de tudder, Cain was de wicked man because he killed his brudder. Adam and Eve were bof black men, and so was Cain and Abel. Now I suppose it seems to strike yer understanding how de fust white man cum. Why, I let you know den. Yer see when Cain killed his brudder, de massa cum and say,—

"Cain, whar yer brudder Abel?"

"Cain say,—

"Don't know massa."

"But de nigger node all de time. Massa git mad and cum agin—speak mighty sharp dis time.

"Cain whar yer brudder Abel, yer nigga?"

"Cain was frightened, an he turn white, an' dis is de way de fust white man cum upon dis earth, and if it hadn't been for dat nigga Cain, we'd never been troubled wid de sassy whites pon de face of dis circumular globe. De quire will sing de forty lebenth him. Pass round de sassar."

Miscellaneous.

IT is easier to blame than to do better.

BY-AND-BY all sewing machines will be run by electricity.

THE population of Iowa has increased just one hundred fold in 35 years, or from 10,531 to 1,043,114.

A CITIZEN of Knoxville has invented a new steam wagon of three-horse power, to accomplish ten miles an hour on common roads.

A RICHMOND fool shot his tailor because his pants didn't fit him. Extreme measures should be taken with such desperadoes.

A LADY in Rhode Island subscribed for a Newport paper, the other day, to be sent to a neighbor who worried her by borrowing her own.

EVERYTHING on this earth is bought and sold except air and water, and they would be, too, had not a kind Providence made the supply too great for the demand.

ANY business is more respectable than what is called loafing. A young man had better sell clams by the pailful than hang around public resorts murdering time and his own reputation.

A PREACHER once said: "If you know anything that will make a brother's heart glad, run quick and tell it; but if it is something that will cause a sigh, bottle it up, bottle it up."

ONE cause of the scarcity of labor in the South is that the negro children who used to pick cotton now attend school, a fact that is thus appreciated by the New Orleans *Times*: "Thus at least one-third of our industrial force is withheld from production, and the civilized and semi-civilized world must continue to pay twenty-five per cent. more for their cotton in order to gratify the philanthropists."

IT is claimed that Fall River is the largest cotton manufacturing town in the United States, its spindles being more than even those of Lowell or Lawrence. There are twenty-two mills within its limits, and the place can boast of 12,800 looms, and nearly 6,000 spindles. These give employment to 7,500 hands, whose wages approximate a quarter of a million monthly, and whose labor produces one hundred and twenty millions yards of goods in a year.

IN England, steam begins to be used on the common roads. A gentleman writes to the London *Times* stating that he has received a visit in the dead of the night from a friend, who, with four members of his family, arrived in a steam wagonette. The reason for selecting that unearthly time for the visit was the existence of a law forbidding the use of steam carriages on the public thoroughfares except between the hours of ten at night and six in the morning.

THE Bay of San Francisco, one of the most magnificent sheets of water in the world, is sixty miles long, ten miles wide, and the mouth of the bay on the same parallel as the mouth of Chesapeake Bay. The coast in the vicinity is skirted by a range of lofty hills, comparatively destitute of foliage on their surface. The mouth of the bay, Golden Gate, of which Fort Point and North Head are the pillars, is a mile wide, thirty feet deep, and immediately spreads into a broad and beautiful sheet of inland water, which, with San Pablo, and Suisun Bays and their connecting straits, is large enough to harbor all the navies of the world. The bay is studded with islands—Angel Island, Alcatraz, Yerba, Buena, Red Rock, The Brothers, The Sisters and Mare Island. Alcatraz is the main fortification of the city, and Mare Island is the seat of the navy yard. The bay is bordered by large tracts of tule or marsh, also by extensive tracts of arable lands. The Sacramento and San Joaquin rivers, with their tributaries, pour a large volume of water into the bay, and afford facilities for inland navigation. Scores of steamers plow these island waters, and hundreds of sloops and schooners —those white winged birds of the bay—flit to and fro, carrying the comforts and luxuries of life inland, and return with the treasures of mountains and valleys.

A CHEAP WAY TO MAKE A COLD-CHISEL.—Take a flat file, break off one end, so that a piece will be left about eight inches long; heat it in a charcoal-fire to redness and bury it in wood ashes, or in dry-slaked lime, so that it may be a very long time in cooling. Grind one end of the file until the teeth have all disappeared; for wherever the scratch of a tooth is left the metal is apt to crack, the cause of which it is not necessary here to explain. Now take the file to any place where you can have the use of a hammer and an anvil, or any other heavy block of metal, and, if you are too poor to pay for it, we have no doubt that any smith will let you heat your file and hammer it yourself without charging you much. Hammer out your file until it is sufficiently thin, and keep on hammering it with light blows, until it cools to what is called a black heat—that is, a heat just visibly red in perfect darkness—after this, thrust the cutting end in a charcoal-fire, until one inch is red hot. Now cool half an inch of the edge in cold water, which will render the edge quite too hard. Watch the color of the steel as the different shades appear near and at the cutting edge, and as soon as you see a light straw color on the surface, plunge the chisel into cold water. But on this point, practice alone is a safe guide. The great points which require attention are to avoid burning or overheating, and to pack or hammer-harden the steel well.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

WANTED—A purchaser for my shop and stock. I have a good trade, and no opposition, in a flourishing town of 4,000 inhabitants; on two railroads. Good reasons given for wanting to sell. Address W. R. Bigham, El Paso, Ill.

WANTED—PAINTERS. Send ten cents for a sample of A. Griffin's patent Carriage Stripes and Corner Piece. Address A. Griffin, Meshoppen, Pa.

WANTED—Numbers 2, 4, 5 and 6 of Volume III of this JOURNAL, for which a like number of copies of either Volume IV or Volume V will be returned. The person sending will specify the numbers desired.

WANTED — A *first-class* Carriage Painter. Address Glass Box 305, Omaha, Nebraska.

WANTED—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

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Felton, Rau & Sibley, Philadelphia, Pa.
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Joseph Johnson. Cochranville, Pa.
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CASH

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY
SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, November 20, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.

" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.: No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.

Forged, Philadelphia List price, per doz.: No. 0, $1.05; No. 1, $1.05; No. 2, $1.05: No. 3, $1.10; No. 4, $1.20: No. 5, $1.30. 15 per cent. disc't.

Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.: No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.

Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.

" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7: 1½, $8.50

Axles. Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.

" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.

" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50: 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.

" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9: 1⅜, $11.00; 1½, $13.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim. 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.: large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr.. 40c.

Bolts, Phila , 40 per cent. discount from list. Clip King bolts, per dozen. Nos. 1 and 2, $3.50.

Buckles, japanned. W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.

Buckram, per yard, 16 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.

" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.

Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30; English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.

Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 31c.; 6-4, 45c.; drilling, 5-4, 44c.: 48 inch, 46c.; 6-4: 62c.; duck, 5-4, 58c.: 50 inch, 63c.; 6-4, 70c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 55c.; 48 inch, 60c.; flock drill, 48 inch, 90c.; do., muslin, 80c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 14c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.37; ¾, 1.50; New York pat., ⅝, $1.12; ¾, $1.20.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.: best picked, from 35c. to 50c.

Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.

" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $3.75.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $30.

Leather, per ft., dash, No. 1, 13½c.: do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 25c.; do., No. 2, 22c.; enam. trimming, 23c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

" spoke ten. machine, each, sm., $15: large, $25.

" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50: No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.

" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.

" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.

" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.

" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $2.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10: $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1 85; ⅞ $2.00; 1 inch, $2.15; 1⅛, $2.50; 1¼, 2.65.

" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.

" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.

" ball, 1¼ inch, $4.00; 1⅜, $4.50: 1½, $5.

" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6

" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.

Slat irons, wrought. N. Y. pat., per doz. sets, 4 bows, $12

" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.

" plated, short, $1.20; 1 long iron, $1.57.

" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.

" Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 23c.; 1½. 3. 4 and 5 plates, not shorter than 33 inch, 22c.; shorter than 33 inch, per lb. extra, 3c.

" Bright oil-tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.

" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50: ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top holders, Thomas patent, buggy, $5 each; extension, $7 each.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1 .25; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.

" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.

" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.

" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 1C, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.

Whip sockets, imp.. cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

Whiffle-tree plates, Morse's patent wrought, $2.25 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75: 1½ $3.25; double extra, 50c. per set on these prices

" ash, red oak and common hickory, per sett, 1 1⅛, 1¼, $1.25; 1⅜, $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.

" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2.25 per set.

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.

" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36: straight heel, $30: grocery, $20.

Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
" " double " $4.50 "

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3: extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4: unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deed red for striping and fine carriage painting.) Vermillions—English pale, $1.40; deep, $1.30; Ger. gotn. pale, $1.40; deep, $1.30; Chinese, $1.30; Trieste, $1.25; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 13½c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 14c.

Yellows—Pure chrome, L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.10; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000, 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, for balance of present volume, for one dollar each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

*HARPER, HENRY, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

*ATWATER, H., Agent. 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winsted, Conn.

Brush Manufacturers.

*THUM, CHARLES D., 150 North Third street, Phila.

Carriage Body Manufacturers.

NORCROSS, H. S., (light,) 1712 Coates street, Phila., Pa.
SHEW, LEVI W., 127 Park street, New Haven, Conn.
TOWNSEND, C. T., 116 Dixwell av., New Haven, Conn.

Carriage Bolt Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDON, A. & M., 22d street, above Vine, Phila., Pa.
*SCOTT & DAY, 38 North Third street, Phila., Pa.
SHIELDS, WM., 23d street, above Race, Phila., Pa.
*SKELLEY, T., 24th st., below Callowhill, Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.

Carriage Castings.

*FITZGERALD & FLAGG, 218 N. Third st., Phila., Pa.

Carriage Wheels.

BROWN, S. N. & CO., Dayton, O.
LA FARGE, I & J., Rahway, New Jersey.

Coach Hardware and Trimmings.

*ATWATER, H., 1625 Market st., Phila.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
HIGH, J. J. & L., 156 Grand street, Rahway, N. J.
KEIM, GEO. DEB., 162 North Third street, Phila., Pa.
KENNEDY & CO., 305 Arch street, Phila., Pa.
*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*ROUSE, J. G. & CO., 4th & Arch sts., Phila.
*SCOTT & DAY, 38 North Third street, Phila.
SNYDER, W. & A. J., 115 North Third st., Phila.

Carriage Draftsmen.

*MULLER, A., 142 Second street, New York City.

Coachmakers' Tools.

WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

Coach Lamps.

*CAREY & POST, 234 Carter st., Phila., Pa.
*NIXON & WIGLEY, 39 North Seventh street, Phila.

Felloe, Spoke and Shaft Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Fifth Wheel Manufacturers.

HAYDEN & LETCHWORTH, Auburn, N. Y.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*SCOTT & DAY, 38 North Third street, Phila.

Iron Merchants and Manufacturers.

*ATWATER, H., 1625 Market st., Phila.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.

Ivory and Horn Turners.

*ATWATER, H., Agent. 1625 Market st., Phila.
HACKERT & CO., 99, 101 and 103 E. Houston st., N. Y.

Paint and Varnish Brushes.

*FELTON, RAU & SIBLEY, 136 North 4th st., Phila.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*THUM, CHAS. D., 150 North Third street, Phila.

Permanent Wood Filling.

*VALENTINE & CO., Boston, Mass.

Rubber Enameled Carriage Cloth.

*ODORLESS RUBBER CO., 19 Park place, N. Y. City

Paints, Oils and Varnish.

*FELTON, RAU & SIBLEY, 136 N. 4th street, Phila.
LUCAS, JOHN & CO., 141 North Fourth street, Phila.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., Phila

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

*CROWELL, DAVID, Wood Works, Rahway, N. J.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Spring Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*GARRETT, KENT & CO., (Agents,) Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.

Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

*ATKINSON. W. & CO., 1270 Broadway, New York.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

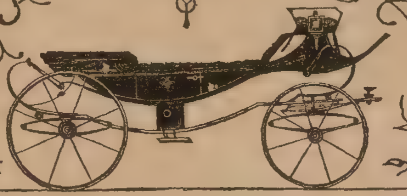
*FELTON, RAU & SIBLEY, 136 N. Fourth st., Phila.
*GARRETT, KENT & CO., Wilmington, (Harland's.)
KEYSTONE VAR. & JAP. WORKS, 313 Race st., Phila.
*MINETT & CO., 60 Pearl st., N. Y., & 7 S. 10th st., Phila.
PARKER & GILLESPIE, 228 Pearl st., New York City.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*SMITH, EDWARD & CO., 161 William street, N. Y.
*VALENTINE & CO., Boston, Mass.

AYRES, LIPPINCOTT & CO.,
WHOLESALE DEALERS IN
CARRIAGE MATERIALS AND SADDLERY HARDWARE,
No. 49 NORTH THIRD STREET,
PHILADELPHIA.

We invite the attention of Manufacturers and Dealers to our complete stock of goods in the Carriage line, which we propose to sell at the lowest market rates.

Our facilities in the purchase of goods, in large lines, often enables us to supply them below Dealers and Manufacturers **PUBLISHED** prices.

COACH-MAKERS'



INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 4. JANUARY, 1870. $3.00 PER ANNUM Always in Advance.

THE NEW YEAR.

It is natural for us to look over a year just closed, and call to mind our course of conduct in every relation our lives bear toward society, and wherein we see we came short in duty to ourselves or others, are apt to *promise* to mend in those particulars, whether we keep our promise or not. In the majority of instances the promises are like clay pipe stems, easily broken. At the close of every year we are compelled to settle up our business accounts, pay our debts, or be classed among those who are poor managers. At this season the man of business is looking closely into his business affairs. The stock on hand is carefully taken; the eye runs restlessly over columns of figures in the hope of seeing a balance in favor of profit. Should the investigation prove unsatisfactory, there will be self-upbraiding, and maybe gloominess and carelessness as to consequences.

Memory is generally very active and retentive, when, at the close of the year, a man finds himself hemmed in by creditors whose cold staring eyes seem to be ever upon him. Memory stands, and tauntingly recalls this and that piece of folly which one knows he was guilty of; it may have been a rash speculation, or a failure to seize an opportunity for legitimate gains; the loss of a skilled artisan for the sake of saving a trifle off of his wages, a penny wise and pound foolish plan; neglect of business through real laziness, or by being led away by jolly good fellows (?) who are fond of the road and the social glass.

No matter what may have been indulged in which consumed time or money uselessly, memory will array all before the mind, and be the means of calling forth many promises for the year just coming in.

It is right and proper to take a vow, but better not to bind ourselves to pursue a certain course and afterward break our promise. Whatever we may propose to do in the way of improving on the mistakes made in 1869, one promise should be seriously made and faithfully kept; that is, to bring our business into a safe channel, by cutting off all needless expenses. As far as possible let the cash system be adopted, both in buying and selling, for there can be no better way to gain complete control of our affairs.

It is very convenient to have good credit, and at times may save a man from losses; but when abused, it robs one of his standing and crushes out every feeling of manliness and independence. But, away with the thoughts of the past, or an undue anxiety for the future; our wants have thus far been supplied, and unless we have too many, we need not expect to suffer hereafter. We will begin the new year cheerfully as possible, and after doing all in our power to satisfy the demands made upon us, let the remainder lie over for another time.

The country is gradually recovering from the effects of our late civil strife, and the States which wandered off for a time are nearly all again represented in the national councils. They have had good crops, the result of well directed and well paid labor, and they are inviting skilled laborers and mechanics to settle among them to help develop the natural resources of that section. The demand for carriages south was far better during 1869, than at any time since the war, which is a good evidence of prosperity returning to that people. Eastern manufacturers have not been unmindful of these signs, and in several instances which might be named, they are making preparations for heavy shipments in that direction.

Mechanical, State and County Fairs have been held during the last year in different sections, where the products of factory, workshop and farm have been exposed, in order to keep up a lively interest in each department, and encourage the people to renewed efforts in the direction toward perfection.

Mechanical ingenuity has not been idle, and the Patent Office Reports show that not less than fourteen thousand patents have been granted during the year 1869. Many of them are valuable inventions, which will in time lessen actual labor, and increase the demand for the manufactured articles. There have been several patents taken out on improvements about a carriage; new wheels, axles, springs, top irons, shaft, coupling boxes, whip sockets, &c., &c.

The mechanic and inventor, the farmer and merchant, have all striven to gain some new ideas, and better their condition by honesty through a legitimate calling, and we know of none who should repine at their lot more than the slick rum-seller, gambler and gold speculator, who may not feel the pressure of hard times upon them. With us, the dull times among carriage-makers has had a sensible effect, yet we will not complain, for we must assume a portion of the cares as well as the pleasures of business life. We are hopeful for the future, and are willing to take the bitter with the sweet. The dull months of winter will give place to the busy and cheerful opening of spring, when all will go off more lively, and, we trust, with increased profits.

Ere the JOURNAL shall have reached our most distant subscribers, 1870 will have dawned upon the world, and we here conclude by wishing all a happy and prosperous new year.

* * *

☞ Woodburn, Smith & Co. are deservedly receiving a large share of patronage. See advertisement.

PHILADELPHIA CARRIAGE BOLTS.

The manufacture of carriage bolts in Philadelphia has assumed large proportions, owing to the good qualities they possess; for in every section of the country they have been tested to that extent that no doubts are entertained with reference to them. Wishing to present some facts connected with the origin of the Philadelphia bolt, a favorable opportunity has lately been afforded us by receiving an advertisement from M. J. Coleman, who is successor to his brothers, E. & P. Coleman, the founders of this important branch of trade.

This factory being the largest in the city, we are pleased to be able to present a sketch of its history and interior workings. It is called the

EAGLE BOLT WORKS,

and is situated at No. 2030 Arch street.

Calling here lately, we were escorted by Mr. M. J. Coleman, the proprietor, throughout the establishment, and put in possession of some facts relating to the starting of the business by E. & P. Coleman, and the subsequent increase up to the present time, which cannot fail to be interesting to our readers. The reputation the Coleman Bolts have gained throughout the country, has been secured by honest dealing. The bolts have always been made of the best Norway iron, and no pains spared to make them as uniform and perfect as the most approved machinery could produce. This assertion will not be denied by carriage-makers, far and near, who have used them.

But let us look at the disadvantages attending the starting of the business, and trace it down to the present time; in doing which, we will be taught a beautiful lesson, one that should be remembered by all.

WHEN ESTABLISHED.

E. & P. Coleman, in the year 1845, decided to commence the manufacture of bolts. Without capital, save their own iron wills and strong arms, they rented a cellar on Market street, in this city, and started out to solicit orders from the hardware dealers. The present foreman of the machine shop, Mr. Jas. Haslam, who is in his sixty-second year, gave them the first order, which consisted of some coach or wood screws, with square heads. Strange as it may seem, the boasted city of Philadelphia, with all its manufactories and large hardware houses, could not, at that day, fill a small order of this kind.

The first order was filled and delivered in person by Ebenezer Coleman, carrying them in a small bag.

We do not mention this for the purpose of disparaging those who were our mechanics at that time, but to show that there was no great demand for bolts, and that through the enterprise of the founders of the Philadelphia Eagle Bolt Works, a demand was created, which has steadily increased until the supply is scarcely equal to the demand, although many similar factories are now in operation.

This, then, was the day of small things, which, not being despised, has, after twenty-four years of patient toil, resulted in a business that demands the labor of two hundred and fifty hands, working with machinery, which is equal to as many more. In 1845, three or four men employed were able to fill the orders, which, when completed, could be delivered on the shoulders of one man. Now, the packing room has tons of bolts ready for shipment.

E. & P. Coleman attended closely to business, and, by producing the best quality of bolts, found the demand increasing on them, until they were scarcely able to supply it.

A great many carriage-makers, at that time, made their own bolts, and, of course, the demand for machine-made was not so great as at present. Malleable bolts, which were used, proving worthless, carriage-makers mistrusted all others, until after testing the qualities of the Coleman make, they found that a good tough bolt, always reliable, could be purchased, and it was but a short time until malleable bolts were numbered with things of the past.

About seven years ago, Mr. M. J. Coleman, the present proprietor, took charge of the business and infused into it new life. He introduced several improvements, which added to the facilities for making bolts, and a solution to be used instead of oil, which rendered the process more cleanly.

THE BUILDING

Now occupied, has a front on Arch street of 145 feet, extending back 167 feet, and three stories high. The ground floor contains the forges and machinery for making clips, hammering nuts and punching them, and forming the heads of different kinds of bolts required. On the second floor front is a well arranged office, the packing room, lathe room and small store room for nuts; the third floor is used as a machine shop. From the office, as a starting point, we were ushered into the lathe room, where about one hundred hands are employed; some attending the lathes, others sorting and fitting on nuts, and various other light work.

The machinery is very perfect, cutting threads as by magic. The work being light, women and boys and girls are here employed. At first sight one feels a throb of pity for the women and girls, especially those who are standing up to the lathe, or at work at a vise, or handling the bolts in sorting or fitting nuts; but when told by Mr. Coleman that the majority of them earn good wages, and might otherwise have been idle, if he had not introduced female labor into the works; and further, that they are the widows and orphans of our soldiers,—when we hear this, and remember how many females were ruined by the fortunes of the war, we can but say, these are well cared for.

A soldier's widow has several hands employed, who earn fair wages, while she books from twenty to twenty-five dollars a week; she has worked here about seven years. We noticed three or four elderly women in this department. The young girls are merry over their work, and although their occupation is very unclean, they do not appear to mind it. They have a dressing room, where they can lay by their street dresses, when they come to work, and when quitting time arrives, may appear on the street in a clean garb.

This room is clean, compared with other bolt works, where oil is used. Mr. Coleman makes a solution, which is used instead of oil. It is conducted through pipes, running along over the benches, and tapped near by each lathe, having a small brass conduit to convey the solution, or oil, to the dies; beneath each machine is a large pan, which catches the drippings, thus keeping the floor clean. Any person who has visited bolt factories, is aware of the great amount of oil used in cutting the thread, and how often it is to be found flying around over everything. Here the reverse is true, great pains being taken to keep the floors clean.

THE ANNEALING ROOM.

Here are two ovens, where the bolts are heated and then allowed to cool gradually, to impart toughness, or rather to remove the possibility of their being brittle from overheating, giving the bolt temper to bend, when sudden strain comes on it, rather than to break. The ovens are filled alternately and locked, to prevent any tampering with them.

MACHINE ROOM.

All the machinery used in the works is made in this department. We were not a little surprised when we learned this, but can readily understand the economical advantages to be derived from it. Planing and other machines, of the best kind are used in giving form and beauty to the work in hand. Among others that might be mentioned, our attention was particularly directed to a heading machine, which feeds itself, and heads 56 bolts a minute.

Somewhat of a curiosity was shown us, which was a steel shaving 59 feet long, cut off by one of the planers.

From the machinery room we descended to the ground floor, where the forgers are employed. The noise of the throbbing machines is almost deafening, while the blazing furnaces, (where the bolts are heated, preparatory to shaping and heading,) suggest the idea of Lucifer's regions. One machine hammers nuts; a clip machine, with a few blows of the heavy die, falling perpendicularly, produces very perfect work; while others, as you pass behind them, are continually dropping red-hot nuts, punched. They are conveyed by a pipe, which runs from the head of the machine to the back, where a vessel receives them.

The machines for forming the shoulder and head of bolts work beautifully. When the red-hot bars, or rods, are fed to them, they do their work instantaneously, by compression and sharp blows. We shall not soon forget what we witnessed on this visit, and hereafter, when we pick up a bolt, will recall to mind the labor and capital required to successfully carry on this important branch of trade.

Mr. COLEMAN'S advertisement appears in this number of the JOURNAL, in reading of which it will be noticed that this brand is required by the government in its specifications for supplies, for army wagons, ambulances, &c. Wm. D. Rogers, carriage-maker of this city, also recommends them, we notice, in a certificate over his own signature. See the large illustrated advertisement in back of JOURNAL.

CARRIAGE GOODS.

It is surprising to notice what an increase there has been, in a few years, in the demand for carriage material of every description.

We need not look very far back into the past to see the comparatively limited number of furnishing houses, and the insignificant character of the factories where bent work, &c., was manufactured. Carriage-making has progressed steadily, and as emigration flowed westward, the demand increased for vehicles of various kinds, until at present, throughout our broad domain, there is scarcely a town but what can boast of a carriage shop of some sort. To supply this host of carriage-makers with materials, has called into being correspondingly heavy furnishing houses in all of our large cities. Occasionally we meet with a firm in a small city, which, by great energy, build up a heavy trade.

The firm of Garrett, Kent & Co., at Wilmington, Delaware, is among those who deserve especial mention. This house, we learn, was established by Thomas Garrett, in 1822. The present active members of the firm are Howard Garrett and D. H. Kent. Howard Garrett travels, and heads that department; D. H. Kent has charge of the home business, which includes, of course, that important part, the purchase of stock. Their sales amount to little less than a half million a year, which may be accounted for in part by their varied and extensive stock, and the low prices charged. Buying very heavily, they claim to sell wholesale and retail as low as the manufacturers.

We were recently shown through this establishment, and were much surprised at the heavy stock of iron and steel, tin and metals, heavy hardware and tools, coach hardware and trimmings, varnishes, paints and oils, and woodwork of almost every description connected with coach-making; in fact, there is not less than six different establishments combined in one, with a heavy stock for each, enabling purchasers to procure everything they need without the bother of running from place to place, and avoiding the extra expense of separate shipments.

Being large importers of, and manufacturers' agents for the most of the goods they sell, gives them a decided advantage in filling orders, especially from a distance; and railroad communication, south and west, enables them to make shipments as readily as can be done from the large cities.

We would direct the attention of our readers to the advertisement of this live firm, and bespeak for them a continued share of patronage.

GLEANINGS.

Abbott, Downing & Co., Concord, N. H., who carry on very extensively the manufacture of Concord coaches, express and other wagons and carriages, have recently introduced the eight-hour system in their factory, with a corresponding reduction in wages. * * One of the premiums given at a town fair, held in Oneida, N. Y., was "THE COACH-MAKERS' INTERNATIONAL JOURNAL for one year." This bit of information we first heard of when the subscription was sent in. Messrs. Saunders & Barrett were the recipients. * * Business in the carriage line in Philadelphia is quiet. There is a moderate demand for the heavier class of vehicles. Sales of finished work are not lively. The leading builders of heavy work have some orders ahead; but, on the whole, we may write it down as dull. * * The latest style of coachman's coat, just imported, is made of drab kersey. It has a circular cape, divided into four parts by the over-lapping edges of each division, which run in the shape of the cape. Large round plain brass buttons, five in front, three under the pocket flaps, and three at the back of cuffs. Pocket flaps and cuffs have three points, a button to each point. It is a handsome coat. * * The Laudau is becoming very popular; it is certainly a stately carriage. It took its name from a town in Germany, (Landau,) where it originated. We publish in this number the latest novelty in the style of Landau, kindly furnished by Messrs. Killam & Co., of New Haven, Conn. * * The Workingmen's International Exhibition, which is to be held in London, in 1870, is progressing favorably. The workmen are to receive the full credit for their skill in whatever may be exposed. This end will be secured by having each article stamped with the name or names of those who actually did the work. Mr. Gladstone is President. Much interest seems to have been awakened among European governments with reference to the movement, and with us, some of the Southern and Western States have taken hold of the matter in good earnest. * * A colored footman, a boy apparently not past eighteen years of age, was standing on ——— street, lately, awaiting the return of his mistress. His coat and hat were "a world too wide for him," and he presented a truthful picture of somebody's crude notions of what is stylish. * * The builders of heavy work in Philadelphia are Wm. D. Rogers, 1009 Chestnut street; Jacob Rech, corner of Eighth and Girard avenue; Watson & Co., 825 North Thirteenth street; Beckhaus & Algaier, Frankford road and Girard avenue; and Petry, Guissell & Bayha, 480 St. John street. * * While you are making promises to do better at the incoming of the new year, don't forget to renew your subscription to the JOURNAL should you receive an expiration notice. * * Read the Price List carefully, as well as every advertisement in the JOURNAL. There are no *humbugs* advertised in our columns, which cannot be said of an *older publication*, which claims to have "saved its friends from being robbed of large sums of money." * * The season having arrived when sleighs should be in demand, we hope to record hereafter that the carriage and sleigh-makers have had a profitable run of trade. Last winter's investments in sleighs were not generally profitable.

CHARLES E. WARD.

We desire it generally understood that Chas. E. Ward, formerly of Rahway, N. J., is no longer an agent for this JOURNAL, and we warn all persons against entrusting him with money intended for us.

ADVERTISEMENTS.

Several of our advertisers, whose time expired with the December number, have notified us to continue the same. Special mention will be made in our next.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "FRENCH OR SQUARE RULE" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Vol IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted. Persons having either or all the following numbers of Volume III, and not wishing to preserve them, can have them exchanged for any numbers they may desire in either Volumes IV or V. The numbers we desire are as follows: *November, No.* 2; *January, No.* 4; *February, No.* 5; *March, No.* 6, all of *Volume III.* We can supply full sets of Volume II at $1.25.

OUR NEW BUSINESS CHART.

This chart is 14 by 19 inches, printed on tinted paper, containing nine fashion plates, four monograms, and has an oval centre for manufacturer's card. One of the plates is placed in the centre of the oval space, yet leaving ample room for the name and place of business. This chart is specially adapted for mailing; the cost for sending one unsealed would be only two cents.

Persons ordering may select any styles heretofore published in the JOURNAL, not exceeding nine in number.

Price, $10 for first hundred, and $5 for each additional hundred.

☞ Sample copies sent to any address on receipt of ten cents.

Business charts of all kinds gotten up at reasonable rates.

OFFICE CHART.

We are also prepared to fill orders for our oval centre Office Chart. It is handsomely printed on lithograph plate paper, suitable for framing. It is 24 by 30 inches, containing 28 cuts of latest styles coaches, coupes, rockaways, buggies and sleighs, with oval centre for manufacturer's card. This chart, when framed and hung up in the office, presents a very attractive appearance; apart from its value in assisting the customer to select, or more readily make known to the builder the kind of carriage he desires built.

Price, $1; sent post-paid, and secured from damage by being wrapped on a roller. Name not printed in centre unless ordered, which costs $2 extra.

Fashion Plates Explained.

WATSON PHÆTON.

PLATE No. 14.—Our draftsman has produced in this plate a very pretty design for a light extension-top phæton. The raking lines, which are now so fashionable, remove all appearance of clumsiness; and on this class of vehicles, more especially, they contribute to produce an appearance as if floating in the air. The side view presents a variety of lines which cannot fail to attract the attention of the most careless observer. Where platform work is seldom called for, the builder can hang it off on a perch carriage-part, which will also look well.

DIMENSIONS.—Width of seats to take 43-inch bows. The body has 1½ inches turn-under. Doors cut through, shutting against the rocker. The back quarter a frame work, with panel on the outside, the joint crossing at the square cut. Front quarter of a solid piece of poplar, with a pillar let in on the inside, having a square shoulder coming to the outer surface, and glued and screwed to the rocker. Moulding for belt: scant ¼ inch, half diamond, passing around the body. Seats: square corners. Rocker plates: 2 inches by ⅜, steel. Hubs: 6½ by 4⅜. Front band: 3⅛; back band: 3⅝. Spokes: 1⅛. Tire: 1 by ¼. Axles: 1⅛, steel. Springs: 1½ inch, 4 plates. Wheels: 3 feet 6 inches and 4 feet 2 inches. Track: 5 feet.

PAINTING.—Body: panels, English purple lake; belt, black, fine lined, as shown with a light olive color; outer edge of seat skirts traced with a fine line of gold. Carriage: black, striped broad line of olive, edged on the front of stripe only, with a fine line of canary color. Face of spokes, hub, and face of felloe, fine line of gold.

TRIMMING.—Brown cloth, with wine-colored morocco leather welt. Brown carpet, with circular figures of white, light brown and black. Lamps: column pattern.

ELM CITY LANDAU.

PLATE No. 15.—Again, by permission of Mr. KILLAM, a noted carriage builder of New Haven, Conn., we have received from the cunning hand of his draftsman, Mr. HILDEBRAND, a well-executed drawing of a Landau. That its side elevation, as represented, is entirely new and novel, we think no one will question. Having seen this Landau completed, we must acknowledge that it stands without a rival. The lower line of the body, which is carried by mouldings on to the door, forming a sharp angle near the bottom at the centre, places this design deservedly among the novelties. For construction, see D. BOARD'S Department in this number.

DIMENSIONS.—Hubs: 8½ by 5½. Front band: 4 inches; back band: 4½ inches. Tire: 1⅜ by ⅜, steel. Axles: 1⅜. Springs: 1½, 6 plates. Wheels: 3 feet 8 inches and 4 feet 2 inches.

PAINTING.—Body: panels, dark lake; mouldings, fine line of gold. Carriage part: dark lake, with broad line of olive, centered with gold, and edged with carmine glazed on vermilion.

TRIMMING.—Brown Turkey morocco and brown satin.

MOUNTING.—Gold.

LINDEN BUGGY.

PLATE No. 16.—The square-box buggy still has many admirers, and but few shops would venture to keep an assortment of light wagons and not have some of these on hand. The only change we present on this pattern is a seat with slats, and the painting of the belt. This is to be laid off in wavy lines, as shown, or an imitation of basket work.

DIMENSIONS.—For half width on seat: 20 inches. Three-quarter seat: 26 inches, with round corner, with slats made ¼ by ⅜ of an inch, the outer surface worked in half diamond form to receive stripe. Belt on body: painted in imitation of basket work with dark carmine. Moulding: 3-16, half diamond. Hubs: 6½ by 3⅛. Front band: 2⅛; back band: 2½. Spokes: ¾. Tire: ¾ by ⅛, steel. Axles: ¾, steel. Springs for half size: 1¼, 2 plates; three-quarter size: 1¼, 3 plates. Wheels: 3 feet 11 inches and 4 feet 1 inch.

PAINTING.—Body: black; belt, striped as shown in the engraving. Carriage part: black, striped dark carmine and gold.

TRIMMING.—Wine-colored Turkey morocco, black welt.

MERCHANTS' PLATFORM SPRING WAGON.

PLATE No. 17.—With plain side moulded off, round corners and paneled seat. This wagon approaches nearer to the style of a carriage than those where the body has a slat-side finish. The workmanship should be equally as well done as that of a carriage—the colors dark and rich—giving to this class of wagons a genteel appearance.

DIMENSIONS.—Length of body: 86 inches; 44 inches wide; side panel, 12 inches deep. The body is a smooth panel, moulded as shown, and round cornered. Mouldings: ⅜, half round, square-cornered panel seat. Tail-gate hung on a rod, shutting inside the body. Top shifting, and attached to a frame sitting inside of the body. Hubs: 12 inches, including sand band. Front band: 4 inches; back band: 5½. Axles: 1⅝. Tire: 1½ by ½ inch. Hind springs: 2 inches, 6 plates. Cross spring: 44 inches long. Side springs: 18½ back of centre, 23½ front. (In December number dimensions of front part of back side-springs should read 23½ inches instead of 53½.) Front springs: 5 plates, 18½ inches back of centre, 22½ in. front. Wheels: 3 feet 3 inches and 4 feet 3½ inches.

PAINTING.—Body: panels, lake; mouldings, striped, fine line gold. Carriage part: lake, striped black and gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

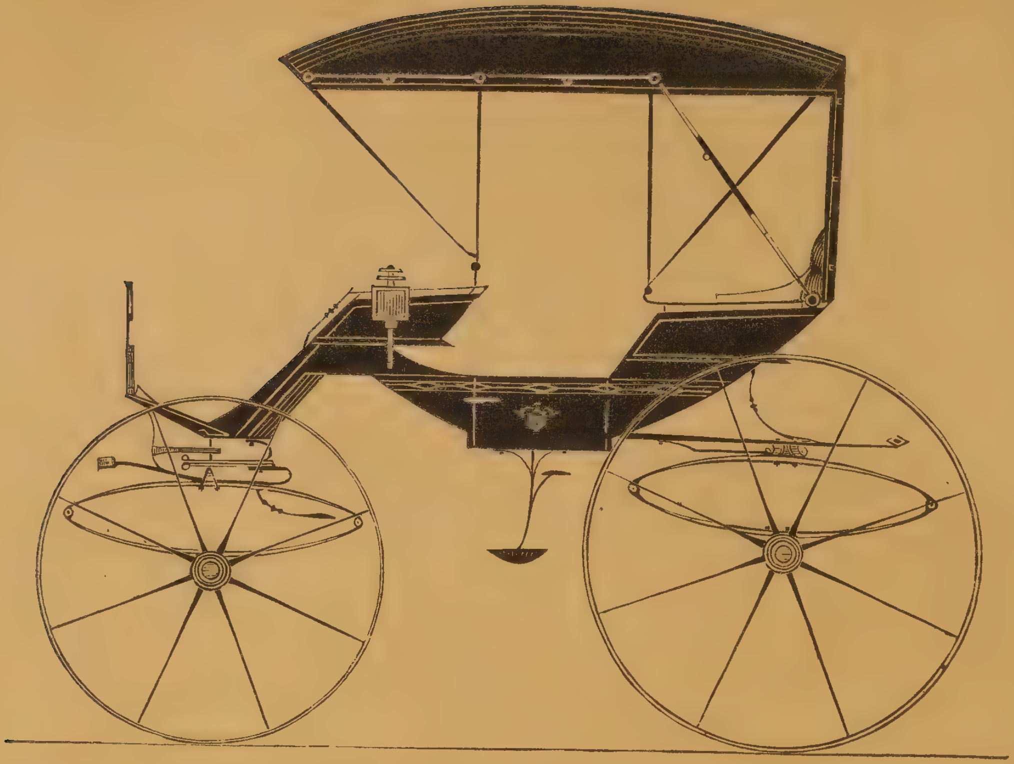
For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

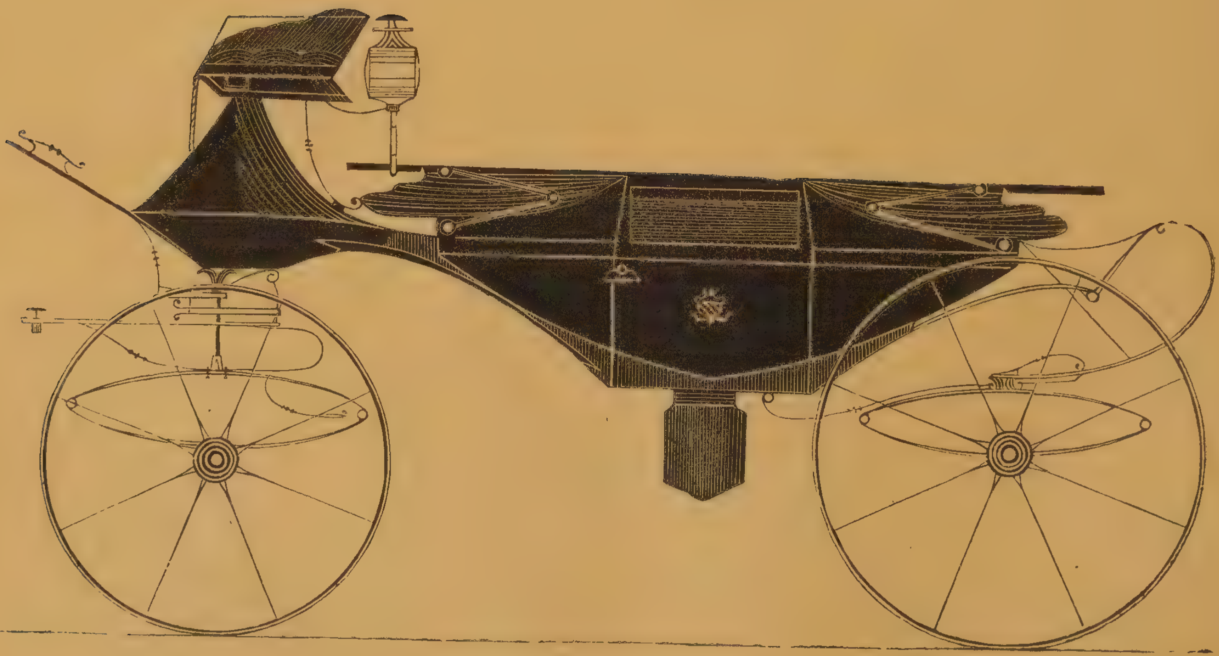
CHAPTER VII.

On the third day, after the spree at Mrs. Fitzpatrick's "ranche," the wind chopped around to the N. E., and the cloud over Table Mountain began to get lower and lower, and by noon the "table cloth" was fairly laid. (I have, in a former chapter, explained this phenomenon.) "Tell ye what it is, boys," said an old sailor, "if the wind holds here for the next five hours, ye'll see us a scuddin' out of this latitude mighty lively. I've been here afore, do ye see, and when I see that 'ere cloud comin'



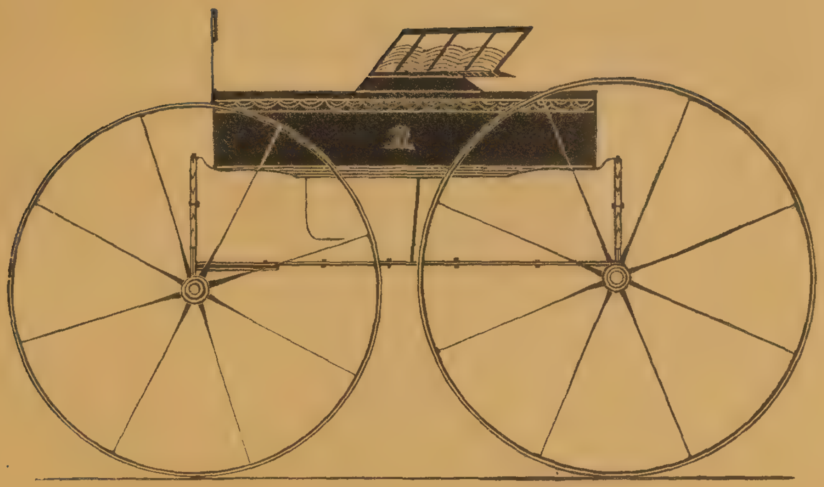
WATSON PHÆTON.

Plate No. 14.—Half-inch Scale.—Explanation on Page 52.



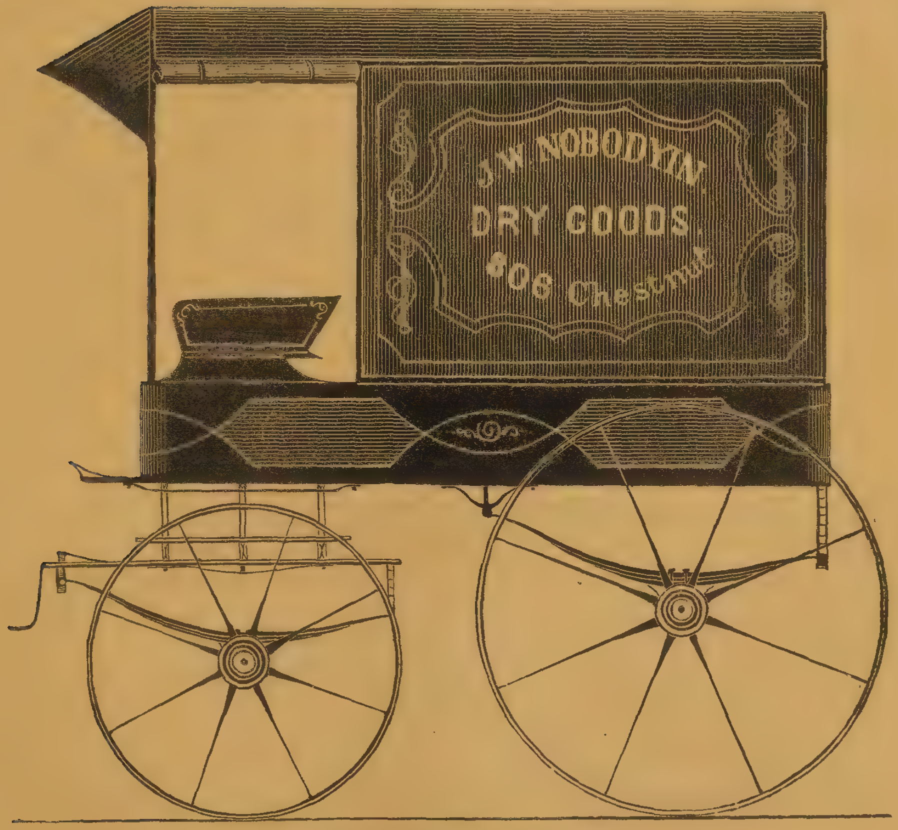
ELM CITY LANDAU.

Plate No. 15 —Half-inch Scale.—Explanation on Page 52.



LINDEN BUGGY.

Plate No. 16. —Half-inch Scale.—Explanation on Page 52.



MERCHANT'S WAGON.

Plate No. 17.—Half-inch Scale.—Explanation on Page 52.

down the mountain, I says to myself look out for a wet jacket to-night, me hearty."

That was bad news for us, because our mainmast had been badly sprung in the gale off the Cape, and it was not yet fixed; for the captain intended to run around the Cape to Simon's Bay, (on the eastern side or shore of Africa,) where there was a fine dock-yard and plenty of spars to either scarf the crippled mast, or put in a new one; this point, Simon's Bay, being the naval station for British ships in these latitudes. The captain had gone across by railroad to arrange for it, leaving orders with the first lieutenant to take the ship around in case he was driven to sea by a sudden blow. And this came now; for just as we had piped to supper, the wind blew so fiercely that we parted one of the bow anchor chains, and with the next squall the other parted, and she swung around on her stern cables, fouling them. "All hands" were piped, and, steam being up, we had to go to sea, actually driven out by the wind. We were not alone, for half a dozen other ships were already driving along under bare poles; and one big steamer was ashore, near the Breakwater, and all the time the water was quite smooth, but the force of the wind, coming down between the mountains, was actually irresistible. I had often heard of the wind blowing so strong that it took "two men and a boy to hold the captain's hair on;" and also of the time when the carpenter being ordered aloft to cut away the fore-top-mast, "*the teeth was blown out of his saw.*" I hardly believed it before this, but I could almost believe it now, while experiencing the force of a Table Mountain blow.

We were soon clear of the land, flying before the wind. Next day the wind moderated, and our course was shaped back to the bay, where, after picking up the anchors left by us, the captain came on board and ordered the ship around to Simon's Bay, to "scarf" the injured mast; he returned by rail himself. This led me to think what is not civilization doing for the world? Here we are at the very southern extremity of Africa, where, a few years ago, the king of beasts roamed in all his native majesty, "monarch of all he surveyed, and with none his right to dispute;" and where these eternal hills and majestic mountains echoed only to the roar of the lion, their silence is now disturbed by the screeching whistle of the locomotive; and where the only path through the wilderness was that of the speculative Boer, in his trading adventures among the benighted Kaffirs, now are fine wagon roads and splendid farms, and beautiful vineyards, where

"Fast by his wild resounding river,
The listless Coran lingers ever;
Still drives his heifers home to feed,
Soothed by the Gorrah's tuneful reed."

What immense power of neck-muscle the African lion must be possessed of. It is related of him that he has been known to carry a heifer over five miles of ground, and even jumped fences with her; but the tall giraffe or cameleopard is his favorite prey. Selecting some well-frequented pool or drinking place, he crouches and waits, with patience, for evening, when these animals come to slake their thirst, and, as they stoop down, unsuspecting of danger, the great tyrant springs, (but first he gives utterance to his terrible roar, which is said to paralyze its hearers,) his victim attempts to shake him off, but 'tis useless; for, driving his claws into the giraffe's flanks, and fastening those destructive fangs in its neck, he will not be shaken off. Finding its efforts to get rid of the lion useless, the giraffe flies away to the desert, and keeps on until it drops exhausted, from loss of blood. The lion has been known to ride *fifty miles* in this manner.

Pringle, in one of his poems, describes the lion's mode of attack:

"Heedless at the ambushed brink,
The tall giraffe stoops down to drink;
Upon him straight the savage springs,
With cruel joy the desert rings,
With clanging sound of desperate strife,
For the prey is strong and strives for life."

An amusing occurrence took place soon after the last and final occupation of the cape by the British. The "Boers" or natives, who were a cross between the Dutch and Negro, did not like the idea of being traded off to another government, and would not submit to British authority. The consequence was the Boers' war, in which they were joined by a great number of the warlike Kaffirs; but they generally got "thrashed," and then they came to the conclusion that it was because of the nine-pound guns used by the British in their operations against them; so they determined to have nine-pounders also. With that view, they made a gun of a hollow log, and bound it with iron, and had big stones for ball; but they put nine pounds of powder into it, and when the British attacked them they fired their wooden nine-pounder, with its nine-pound charge of powder. The consequence was, that none of the attacking party were hurt, but the poor experimentalists, the Boers, were scattered; in fact, pieces of them lay around "promiskus like," as my late friend, Artemus Ward, would say.

We arrived safe in Simon's Bay, and for the next three weeks I spent most of my spare time on the celebrated Roman Rock, fishing for Romans, a beautiful species of perch, of a delicate *rose color*, and a delicious taste, whose flavor was well appreciated by our mess. They were very plentiful. I could catch fifty of them with hook and line in a few hours. From here we sailed for Madagascar, bound for the Port of Tomatave, and my experience of this *little-known* country I will give you in my next.

* * *

For the Coach-Makers' International Journal.

COLOR.

BY J. H. T.

Continued from page 5.

STEEPING OF COLORS.

Take a quantity of color, put it into a vessel, and fill with fair water, to which add some fine powder of alum to raise the color. Let it thus steep a day and night, and you will have a good color. Saffron, steeped in vinegar, gives a good color; and French berries, in fair water, and a drop or two of oil of vitriol, make a fair yellow.

But some colors are to be boiled, as Brazil, logwood, turnsole, rind of walnuts, &c. These, when boiled, are to be kept close-stopped in glasses until you have occasion to use them.

COLORS USED IN DYEING.

There are, in the art of dyeing, five colors, called simple, primary or mother colors, from the mixture of which all the other colors are formed; these are blue, red, yellow, brown and black. Of these colors, variously mixed and combined, they form the following colors: pansy, blue and red; from the mixture of blue and scarlet are formed amaranth, violet and pansy; from the same mixture of blue and crimson-red are formed the columbine or dove color, purple, amaranth, pansy, crimson and crimson-violet. Dyers give the name of crimson to all colors made of cochineal. Of blue and red madder, is dyed purple, pepper color, tan color and dry-rose color. The same blue, with red half in grain, makes amaranth, tan color and dry-rose color. Blue and half-red crimson, compose amaranth, tan color, dry rose, a brown pansy, and fur color of a brownish shade. Blue and yellow mixed together, compose a yellow-green, spring-green, grass-green, laurel-green, brown-green, dark-green, as well as sea-green, parrot-green, cabbage-green, &c. These three last colors are to be less boiled than the rest. This is to be noted, that as to green, the stuffs are dyed twice, first in blue, then in yellow. Blue and brown are never mixed alone, but with the addition of red, either of madder or cochineal, they form several colors.

Red and yellow: of these two colors are composed all the shades of gold-yellow, aurora, marygold, orange, nacaret, granite flower, flame color, &c.

Red and brown: of these two colors are formed cinnamon color, chestnut, musk, bear's hair, and even purple, if the red be that of madder.

Yellow and brown. The colors formed from these two are all the shades of feuille mort and hair colors. Though it be said there are no colors or shades made from such and such mixtures, it is not meant that none can be made, but that they are more easily formed from a mixture of other colors.

COLORING AND NON-COLORING DRUGS.

Thus dyers distinguish their drugs. The first are applicative, and communicate their colors to the matters boiled in them, or passed through them, as woods, scarlet-grain cochineal, indigo, madder, turmeric, &c. The second serve to prepare and dispose the stuffs and other matters, and to extract the colors out of the coloring ingredients, as alum, salt or crystal of tartar, arsenic, realgal, saltpetre, common salt, sal ammoniac, sal gemmæ, agaric, spirit of wine, bran, pease flour, wheat, starch, lime and ashes.

COLORING IN PAINTING.

The manner of applying and conducting the colors of a picture, or it is the picture of lights and shadows formed by the various colors employed in painting.

The coloring is one of the principal branches in painting. Some divide the painters' art into three parts: the design, the composition and the coloring. The coloring strikes the most, but among masters it always gives place to the design.

M. De Piles, observes, "that the word coloring, in its confined sense, is chiefly applicable to a history piece; scarce at all to a landscape." He adds, "that the term coloring relates more immediately to the carnations than anything else."

The coloring, in its general sense, takes in what relates to the nature and union of colors; their agreement or antipathy; how to use them to advantage in light and shadow, so as to show a relievo in the figures, and a sinking of the ground. What relates to ærial perspective, *i. e.*, the diminution of colors by means of the interposition of air; the various actions and circumstances of the luminary and the medium; the different lights, both of the body illuminating and illuminated; their reflections, shadows, different views, either with respect to the position of the eye or object. What produces the strength, fierceness, sweetness, &c., in paintings well colored, is the various manners of coloring in figures, landscapes, &c.

The doctrine of coloring is comprised under the following rules:

Colors are considered either in respect of their use, or their economy and disposition.

1. In respect to their use, they are applied either in oil or water. Those in oil, again, are considered with a view either to their preparation or application.

In the preparation of oil colors, care must be taken that good oil is used, and that they be ground fine; and those which do not dry good, be mixed with some ingredient of a drying quality, and that the tinged colors be mixed in as small quantities as possible.

For their application, it is considered either in respect to the kinds of paintings in works of various colors, or in those of one color. For the first in the larger pictures, put the colors on full, so as they may be impasted or incorporated together, which makes them hold more firmly. Or else the more agreeable ones are mixed, which dry too hard and too hastily, with a little color and the clearest of oil; but in both cases the colors are to be laid on strong at first, it being very easy to weaken and heighten those you wish. The touches should be bold, that it may appear most finished at a proper distance.

In finished works, which are to be viewed near at hand, they proceed either by applying each color in its place, preserving their purity without fretting or tormenting them, but sweetly softening all their extremities, or by filling up all the great parts with one single color, and laying the other colors, which are to form the little things, upon it, which is the more expeditious way, but the more apt to decay.

For the second, the kinds of pictures in one color are two, where the degradations of colors of objects afar off are usually managed by lights, as with crayons and basso-relievo, which is an imitation of sculpture of whatever matter or color. In both these the colors are wrought dry.

As for water colors, they are wrought in various ways, viz: in distemper, where the colors are prepared in size, which method is used on all kinds of matter; in fresco or painting on fresh mortar, where the coloring must be quick, that the matter dry not, and with much care and quickness laying each color in its place, and intermingling them by parcels.

In agouache, where the colors are mixed with gum, and the pencil dragged as in paintings and washings.

In miniature, for small and delicate works, where the colors are to be very fine and clean, mixed with gums and wrought in dots and points.

But in all kinds of painting, both in oil and distemper, especially the latter, care must be taken that the design be fixed, and all the parts marked out before any colors be applied.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

MIDDLEBURY, Dec., 1869.

MR. EDITOR:—I did not think of troubling you with any further remarks on carriage-making, but SPOKE SHAVE puts to me a plain and fair question in December number, pages 40 and 41. My answer is, that my experience is with heavy wagons. With axles set as he proposes, which, by the way, I think is a little too much pitch for good running, I do find almost universally that the tires are worn on the in, or back side, *much* more than on the front or face side; and I think the idea is fully sustained by philosophy, as expressed in my communication of August 6th, 1869, page 186.

I should expect the same result from the running of carriages in the city, were it not for a fact which did not occur to me at that time of writing, and that is the constant grinding of the tires against curb stones, and perhaps the railroad tracks.

On the subject of the expansion of tires, I have had no experience, and am rather slow to comprehend the idea, yet it may be a fact. I incline to the opinion that it is the shrinking or settling of the wheel. The running out of dish I am not often troubled with. Where it occurs, I think it should be attributed, in most cases, to the hub mortice. The mortice should be more tapering than the spoke; an eighth of an inch to every inch of depth is my rule for a mortice, and the front should be so slanting that the required dish is obtained without holding the spoke forward at all, but rather held a trifle back.

I make but few wheels (except for trotting gigs) as light as are mentioned by SPOKE SHAVE. My buggy wheels are mostly 1⅛ by ¼ tire. I have buggy, express and lumber wagon wheels that have been running one, two and ten years without re-setting the tires, and in some instances the tires are nearly worn out.

Let hubs, spokes and felloes be *perfectly dry*, and a dry atmosphere when the tires are set, and I never expect to hear from the wheels again until a new tire is wanted; due allowance being made for the kind of road the wagon runs on.

In my communication of August 6th, which appeared in the September number, speaking of making a good wheel, I said: "give me a dry hub, and I care not how *hard* the timber is, &c." The word "hard" was omitted.

Yours, truly, I. A.

For the Coach-Makers' International Journal.

THINGS IN NEW HAVEN.

The approach of the New Year, with its load of unpaid bills to square up, usually gives coach-makers the blues, long before its actual arrival, and the present year seems to be no exception to those which preceded it, at least it is not here in New Haven. All have caught the infection, and some have got it bad.

Most of the principal shops have reduced the number of hands, also the hours for work, Killam & Co. excepted. I understand there will be a change in some of the firms here soon, which will be important for New Haven coach-making.

The JOURNAL is anxiously looked for monthly, and any failure to appear, at the proper time, causes a deal of anxiety among your many subscribers. Nothing wonderful has appeared here lately in the way of new styles. Should anything of that kind occur, that would astonish the world, we will write you immediately.

VIDE.

TO CORRESPONDENTS.

We are obliged to have all matter intended for the JOURNAL in by the 12th of the month hereafter, and we wish those who have charge of the different departments and correspondents generally to take particular notice of the time. We hope hereafter to be able to mail the JOURNAL so that each subscriber will have received it on or before the first of each month, except those on the Pacific coast and in foreign countries. Remember, your contributions *must* be here by the *twelfth* of the month to insure insertion.

◆

CHILDREN are inquisitive little bodies; for instance: "What does cleave mean, pa?" "It means to unite together." "Does John unite wood when he cleaves it?" "Hem, well, it means to separate." "Well, pa does a man separate from his wife when he cleaves to her?" "Hem, hem, don't ask so many foolish questions, child."

◆

☞ Our new Business Chart meets with especial favor. Send for sample. Price 10 cts.

CANT OF THE ELM CITY LANDAU,

In connection with a careful and elaborate drawing of the improvements it contains, and showing the top in two positions.

PART TWELFTH.

BY A PRACTICAL CARRIAGE ARCHITECT.

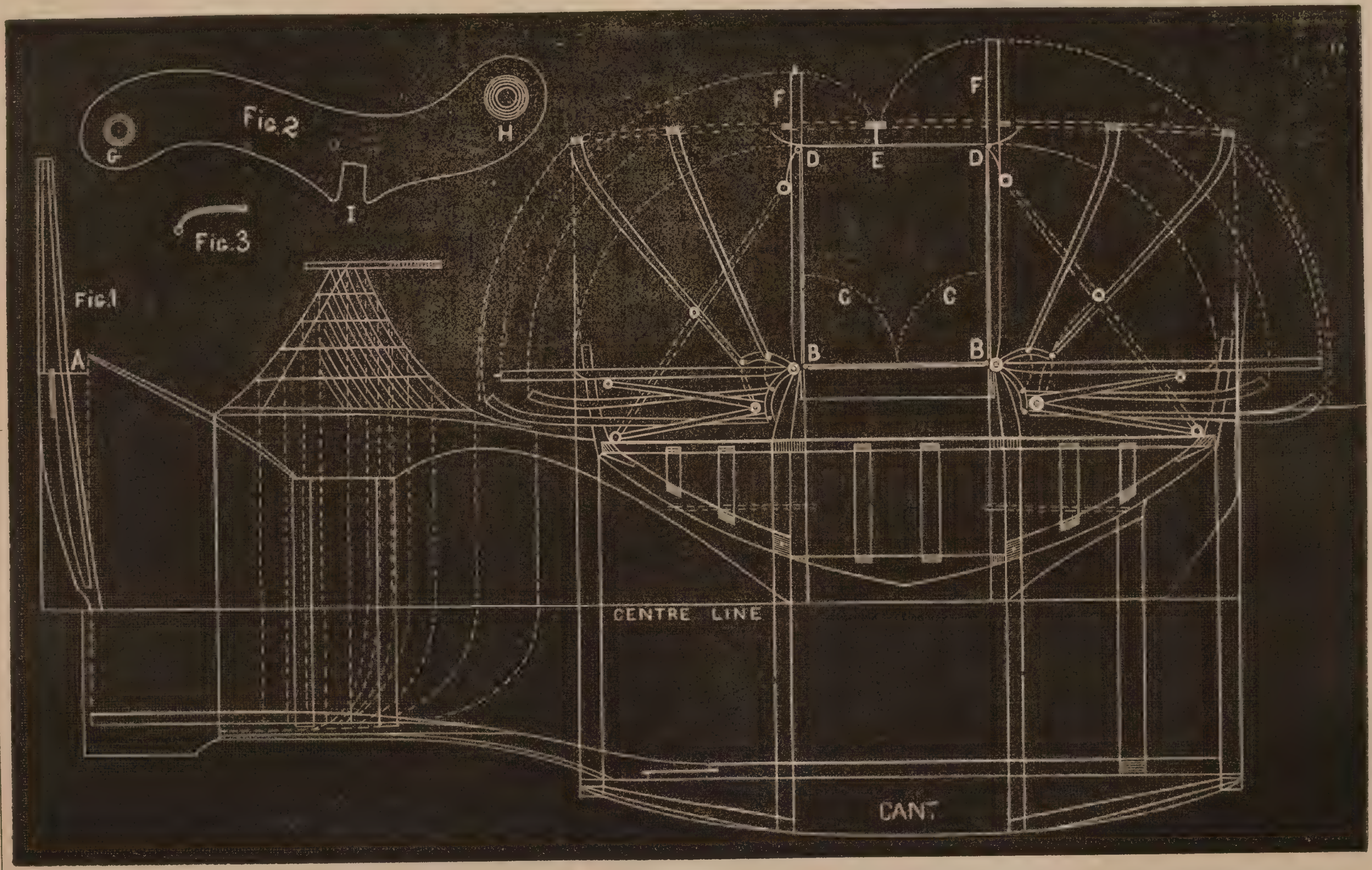
The accompanying diagram represents a landau containing the latest improvements, and is presented in a manner never before published in this country. The labor of putting the drawing on the blocks for the engraver will certainly be appreciated by those who have had any experience in drafting. To indicate the different positions which the iron and wood work assume, when the top is up or thrown down, is a tedious operation, and is closely akin to that of drawing machinery. Examine every part of this outline, and you will find the most minute points, of any importance, carefully laid down.

After the side elevation has been correctly drawn, lay off for the height of door, which is established by the depth necessary to drop the glass frame level with the door, as shown by *Fig.* 1; line *A* being the hinging point of standing pillar, and also to have sufficient room to have the top lie nearly level, (without coming in contact with the boot,) as this is one of the beauties in the appearance of a landau when the top is down.

The glass frame is supported in its position, when up, by the patent iron glass frame supports, which are hinged at the points lettered *B B*. They are boxed into the standing pillars, leaving a rabbit inside, and also on roof-rail. This allows the door to open when the glass frame is up. When the top is lowered, and the glass frame is dropped, the supports (before mentioned) are dropped down in the direction indicated by the dotted lines *C C*. The roof-rail is hinged at the points *D D*, the opening of the top being at *E*. When thrown up perpendicular, the divisions are represented at *F F*.

We will now direct attention again to the point *e*, the joint of division in roof-rail. At this point there is a curve framed each side level with the roof-rail. To make the joint water tight, a groove is cut in the back curve. After the leather is put on, screw on an inch and a half band iron, covering the joint and groove, the ends turned over the roof rail. The edge to be chamfered and finished for painting.

The joint of roof-rail is held even by *dowels*.



CANT OF THE ELM CITY LANDAU.

PLATE No. 14, 3-4 INCH SCALE.

In connection with a careful and elaborate drawing of the improvements it contains, and showing the top in two positions.

AS CONSTRUCTED BY D. BOARD.

For locking it together, the lever represented at *Fig.* 3 is the device made use of, two of which are required on each side of the top. The point *G* is a pivot inserted in a suitable piece of iron, which is screwed to the top; *H* is the knob for turning the lever. The slot *I* catches a pivot in the band iron before mentioned, which holds the top securely at that point. For hanging the doors, use concealed hinge at top, and at bottom a hinge swept to match it, as shown at *Fig.* 3. Bows to be plated on corners, and also corner plates from curve to roof-rail.

There is a drop light in front. The berth for receiving it, when up, is made of leather instead of styles to fall, giving a lighter appearance. A piece of wood is inserted between the leather and head-lining for the purpose of securing the drip moulding. The small back light slides sidewise in a wood frame inserted between the leather and lining.

The seats may be elevated when the top is down, giving the occupants a full view above the top. The mechanism required for the purpose is attached to the seats, and is operated by a lever under the falls.

DIMENSIONS.—Width of body laid out over all, 53 inches; 42 inches front and back; width of boot 30 inches. In building up for the round boot, the stuff requires to be of well-seasoned poplar.

The boot to be prepared for the covering by first filling the nail holes with glue and sawdust, which, when dry, should be filed down level.

For covering, use heavy linen; dip it in hot water, wring out dry, then saturate it in hot glue, and apply it, drawing very tight and smooth. When this is dry, sand-paper it off, and finish with a moulding around the edge.

The working lines, and description of cant, having been previously given in detail, we deem it unnecessary to repeat them in this number.

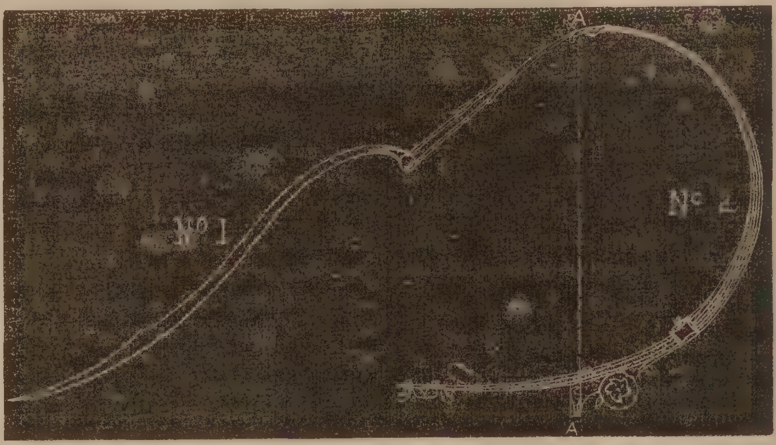
HAMMER SLEDGE & ANVIL

V. ULCAN EDITOR

THE HANGING OF THE BODY.

Continued from page 42.

The main feature of this job lays in the application of the body loops. Shape and position are of an endless variety; and through the lack of a certain rule, the issue depends wholly on the skill of the workman. Practice in scale and free-hand drawing, and a sharp eye, facilitate the work to a great extent. The loops are swept after the draft, and fitted to the body, which, for this purpose, is turned upside down. The loops might then be easily laid on, instead of holding and pressing them under in the reverse position. Care must be taken to have the body level; then measure from any point at the back of the body to the head of the loops crosswise, to bring the loops square. Then ascertain whether the body frame is square, by measuring the same cornerwise; a slight difference might be straightened through the fitting of the loops. The space between (across) the loop-heads must correspond with that between the hook of the C spring; and further, the first must have the same width as the latter, to avoid the play of the strap. The front loops are generally longer than the hind ones, and bent in such a manner as to shorten the strap, and to do away with any unnecessary swing of the body between the front C springs. If the body hangs too low in front, bend the front loops down; and in the opposite case, if raised too much, bend the loop upward, without altering the length of the strap. In any case, try to bring the body as far back as possible between the hind wheels without interfering with the opening of the doors, as it always crowds toward the front.



Dimensions of the loop: at the butt, 2 inches wide, 1⅞ inches thick, the head 1⅝ by 1¼ inches. (See No. 1.)

A detached or dickey seat, on stays, rests with the back stay in a square socket, fastened to the front pillar. The front, or supporting stay of the heel-board, is screwed to an arm, extending from the front loop-head, and kept firm by a square shoulder fitted against a corresponding projection on the inside of the loop-head. The rocker plates should be ⅝ inch thick, and 3 inches high, but might vary according to the height of the rocker. They are made of Ulster or common English iron, and matched to the inner side of the rocker.

A careful workman will avoid bringing a red-hot plate too close to the wood, and do the rest of the fitting in a state of heating, just bearable to the hand. The holes should fit No. 20 screws, and be well countersunk. The ends of the plate, front as well as back, are bent in an angle to fit against the front and tail-bar, 5 inches long, tapering down at the end, and well rounded. A rocker plate should run all along the bottom side, and should be as solid as possible at the bearing point above the top bed and cross-bar. The C spring, No. 2, has 6 plates, 2 inches wide and ¼ inch thick. Parts of this spring are the band, 2½ by 3-16 inch; the jack, whose back or upright part is bolted to the back-bar; the top part follows the sweep of the spring, and slips between the bottom of the spring and the band; a bolt passes also through here. Line *A A*, plumb from the tip of the spring to the back-bar, aids to obtain a graceful and correct curve for the spring. Lastly, the body is hung upon the carriage-part, finished previously, the springs tried again, whether they bear square, and the job finished.

For the Coach-Makers' International Journal.

MR. EDITOR:—I found, by your letter, that you had expected something from me, before now, concerning carriage-smithing, so, without offering any excuses, I will begin by giving you a lesson on wheels, which, in my opinion, is of the first importance, inasmuch as there are but few smiths (probably not more than one in twenty) who are capable of setting tires as they should be, for it is well known that wheels are often ruined by the manner in which the tires are set. There is no part of a carriage requires the display of more skill than in the construction of serviceable wheels, and yet it appears to be less understood than any other branch. It follows that there are a great many wheels spoiled in making.

In the production of a good wheel it is important, first, to have the stuff well seasoned. When ready for use, sort them; and in filling the wheel, drive the stiff spokes in every other mortice, which gives the wheels the same stiffness all the way around, for if the spokes should be a little more limber on one side than on the other, when the tire is set the hub will stand diagonally in the wheel.

In preparing wheels for the tire, they should be put away in a warm room until thoroughly dry. Then according to the weight of the wheels we will fit them for the tire, and give the draft for setting.

For a wheel, Boston coach: rim, 1½ inches; ½ inch dish. Cut the rim out, so that every joint will be tight, both in rim and on the shoulder of the spokes. Cut the ends of the spokes off, so that they will come a trifle below the tread of the wheel or rim. Give the draft in tire ¼ of inch, when hot, after welding;

should be careful to have about the same heat in each tire, or it will affect the draft.

For a wheel: $1\frac{3}{8}$ inches rim, 3-16 draft. Light Clarence: $1\frac{1}{4}$ rim, $\frac{1}{8}$ draft. For a wheel with 1 inch felloe, give $\frac{1}{8}$ inch; the same for $1\frac{1}{8}$ inch felloe. The above drafts, remember, are for wheels having $\frac{1}{2}$ inch dish, or more.

I shall endeavor to conclude my remarks on wheels in the next issue, and contribute hereafter what I conceive may be of advantage to the carriage-smith.

In my opinion, there is no department in the carriage-making business so difficult to explain as the ironing, yet I trust that my experience, as given through the JOURNAL, may be of value. Yours, &c., H. D. F.

THE ART OF COACH PAINTING.

(Continued from page 43.)

OILS, JAPAN AND VARNISH.

Oil is an unctuous substance, animal or vegetable. There are what is termed fixed and essential oils. The fixed oils most commonly used are linseed, (flaxseed,) poppy and nut oils. Turpentine is an essential oil. In the use of oil the painter desires to add a wearing quality to the pigments used, knowing full well that if his paints are mixed without a fatty substance, there will be no adhesiveness imparted, and but little power to resist the action of the atmosphere in its changes.

Oil is used in a less or greater quantity, according to the kind of work to be painted, and the time allowed for completing the work in hand. The house painter may, with safety, coat outside work with color mixed in oil alone, as he aims, or should, to protect the walls and other exposed parts from changes of atmosphere. Using no varnish to finish with, the coatings have the full strength and flexibility of the oil to keep them firm, and are not so liable to crack.

In coach painting the case is quite different. Oil must be used sparingly, else the body of paint laid on will not dry thoroughly; then, when it is inclosed by varnish, there is a brittle surface imparted, which checks the drying of the oily coats for a time, resulting in cracks.

Linseed oil is considered the best for general purposes, on account of its strength and flexibility. It imparts more color than poppy oil, and is, for this reason, not so well adapted to preserving light and delicate colors.

Oil is influenced in drying by the colors with which it is combined, some of which hasten while others retard it. For carriage painting, a good quality of raw linseed oil should be used, as it works pleasantly, dries dead when not used in excess, and is free from that gumminess too often found in the use of boiled oil. Raw oil, simmered over a gentle fire for two or three hours, adds to its drying qualities, and if certain oxides and salts of lead are added, they impart a power to dry very rapidly.

Striping colors, mixed in boiled oil, work kindly, and dry well over night.

It has been stated that the drying of oils depends on the following conditions: The presence of oxygen, which, by an incipient combustion of the hydrogenous oils, fixes them, whence, whatever contributes oxygen to oil dries it, as pure air, sunshine, &c.; hence, all the perfect oxides of metals dry oils. Imperfect oxides, by extracting oxygen from oil, retard drying; hydrogenous substances are ill dryers in oil.

The best dryers are those which contain oxygen in excess, as litharge, (which is an oxyd of lead,) sugar of lead, minium, (the red oxyd of lead,) massicot, (also an oxyd of lead,) manganese, umbers, sulphate of zinc, or white copperas, and verdigris.

Oxygen was named from its property of generating acids; it is the supporter of ordinary combustion.

Hydrogen is a gas constituting one of the elements of water. A moment's thought on the part of those who have not given this matter any attention will fix in the mind the reasonableness of the foregoing statements. We might make this very plain by saying that oxygen is fire, and hydrogen water.

Japan, which is used by the carriage-maker only as a dryer, is made by boiling linseed oil with one or more of the articles named above.

It is too often the case that our japans are made so dark that they sully the purity of fine transparent colors. The manufacturers of japan are not at fault in this matter, as the demand on them of late years has been to produce dryers which would not fail to fasten the paints in a few hours. Hurry, hurry, is the word; and, as a quick and powerful dryer is necessarily dark, the painter must have recourse to varnish, or boiled oil, in the mixture of transparent and delicate colors. Japan, as we generally find it on the market, cannot add any tenacity to the paints in which it is mixed, and should be tempered with oil where the painter lays on but one coat a day. Where two or three coats a day are applied, it is best to use no oil, but depend on the varnish coats to hold all solid.

An article called japanner's gold size, better known to English than American painters, is made as follows: Powder finely of asphaltum, litharge or red lead, each one ounce, stir them into a pint of linseed oil, and simmer the mixture over a gentle fire, or on a sand bath, till solution has taken place, scum ceases to rise, and the fluid thickens on cooling. Valentine & Co., of Boston, Mass., have adopted this name for their manufacture of japan, which is a good dryer, and yet much paler than the usual make. Minett & Co., and Edward Smith & Co., manufacture what they term an oil dryer; that is, the japan is soft enough to mix up colors without adding anything, except to thin down with turpentine while applying coats; it is, in fact, a slow drying japan.

Varnish.—Any viscid, glossy liquid is a varnish; but as the carriage painter has no use for those kinds, which are made in alcohol, or any other liquid which does not impart a gloss and good wearing quality, we need not mention them here. All that a carriage painter requires is to be furnished with a solid-drying rubbing varnish, and a tenacious, pleasant-working and durable finishing varnish.

Varnishes made by the use of oils vary so much in their natures that it is bewildering to even think of them. That there is a difference in the quality of gums used, which add to or detract from the good quality of varnishes, there can be no doubt, but when we are told that Zanzibar gum alone is used, that the oil was the purest and best, that the whole process of making the varnish was in the keeping of old and experienced hands, and then, after trying the varnish, we find it worthless, we are at a loss to account for it. The wearing of any varnish depends on the quality and quantity of the oil used, and the time allowed it to ripen after being racked off.

Rubbing varnishes are required to dry firmly in from two to five days; consequently, less oil enters into their composition. A good wearing rubbing varnish should not be rubbed until the fourth or fifth day after being laid on. When rubbed, it should not sweat out (become glossy,) soon after, even in hot weather. Slow-drying rubbing varnish, when allowed to stand a day or so after having been rubbed down, will sweat out in hot weather, and should again be run over with the "rub rag" and fine pumice before another coat is applied.

Rubbing varnish that sweats at all times, soon after being rubbed, is liable to crack, and should not be used.

By the use of hard drying varnish the painter is enabled to level his work down and prepare for the last coat or finishing varnish. This last coating must be of an opposite nature to that on which it is laid if great brilliancy is sought after, and as its surface must ever be exposed to the action of heat and cold, sunshine and shower, it must possess an elasticity, or oily nature, that will resist these changes for a great length of time.

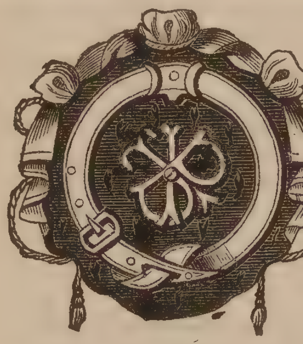
The English varnish manufacturers possess a secret which seems to be hidden, so far, from others; for, while oils may be used in equal quantities by two varnish-makers, and the same quality of gum, the result of the two separate days' work are far different.

Finishing varnishes are considered good or worthless by the finisher according as they work freely, are free from particles of gum, flow out well, and *generally* remain as they are left when the job is completed. This much having been secured, the wearing properties are almost always found to follow.

Varnishes are subject to many changes after being spread on a surface, and occasion the painter a vast amount of trouble and vexation. It crawls, runs, enamels, pits, blotches, smokes or clouds over, gathers up and hangs in ridges, flows off the panel, and collects on the lower edges, and also has the appearance as if fine dirt had been sprinkled upon it.

We cannot give a satisfactory reason why varnish should be so sensitive; for, if we could, we need not labor for a living—the secret would be worth a fortune. We will, however, give in our next a few hints which may be of service to the painter.

THE MANTLE—In which is displayed the Garter and a small monogram, I. T. B. This pattern will make a neat and pretty ornament.



Monograms are still in fashion, and as the Garter and Mantle have always found favor among Americans, we have combined them, which, if delicately handled, will produce an attractive ornament.

The mantle, or cloak, is represented in heraldry in various colors. The outside was made of some suitable fabric, and lined with ermine.

Ermine is painted in representation of the fur of the animal of that name, with black tufts scattered over its surface. The ornamental painter need not confine himself to this single arrangement for the lining of a mantle, but may vary his colors to suit his taste.

The pattern here shown may be painted as follows: the folds of the mantle, which show the outside fabric, paint with a color of a purple tone, mixed of white, lake and ultramarine blue. Mix up at least three tints, so as to produce on the folds the rounded appearance they would naturally assume, placing the lightest of the three tints at the highest point on the folds, and the other two to the left and right.

The colors should dry slow enough to allow them to be blended where they meet, which gives the appearance of the cloth when viewed in the sunlight. That is, the folds not reflecting the same quantity of light from every part would appear darker toward the edges. By blending them, the whole is united, and shows but one piece of fabric under its modifications of light and shade. The inside, or lining of the mantle, paint a delicate gray, the lights white, the tufts with burnt umber, shaded with asphaltum.

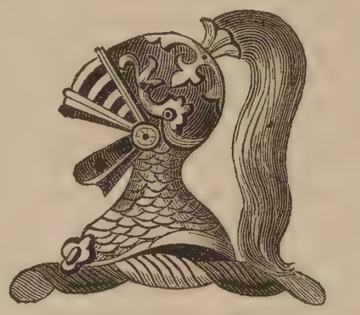
The monogram, garter and cord, on the mantle: gold. Having traced a correct outline of the pattern on the panels, size in those parts to be covered with gold leaf, and when the leaf is laid, proceed with the colors.

When the mantle has been colored and blended in to suit the taste, and becomes dry, high light it with pink, mixed of carmine and white, and touch over the deepest part of the shadows with asphaltum.

The gold cord should be put on of a uniform width, which is best secured by the use of a fine cutting-up pencil. Remember, that the cord is round, and must be shaded accordingly.

Having washed on the shade, produce the effect of the strands of cord by the color you use for lighting the gold parts of the ornament. This is done by diagonal lines placed on the light parts of the cord which were not washed over. Never carry the lights on to the shaded part.

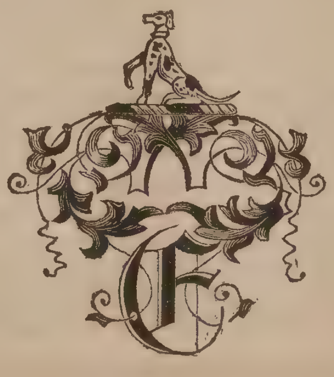
BARRED HELMET AND BREAST-PLATE.—Lay in gold shade with asphaltum, high light with straw color. The plume: gray, lighted with white. The wreath: red and white.



If to be painted representing steel, mix the color of white, black and a little blue, using more white where the effect of light is to be shown. The shadows of a blue black cast.

Brass color, if desired: mix of yellow, light red and black. Light, with straw color, tinted with light red.

INITIAL LETTER E—German text, forming, with the scroll work and crest, an original and chaste design. The Dalmatian, or coach dog, surmounts the whole, adding a lively effect. The initial given in this and kindred forms, we think are more attractive than a simple monogram.



The coach dog is white, with black spots. Let the color be of a warm gray, the high lights white. Spots dark brown.

The scrolls should be painted different in color from the initial letter.

The taste of the painter should direct as to the colors best suited to the panel color.

CHARITON, IOWA, Dec., 1869.

MR. EDITOR:—I hasten to acknowledge the receipt of the JOURNALS. I am very much pleased with them, and consider my six dollars well invested.

Will you oblige me by giving in your next number the process for mixing a quick-drying "rough stuff" that can be rubbed down the next day after laying it on the body; also, for white-lead putty, that will dry quick?

In our Western shops, customers cannot wait long for their work, and we have to use material that will turn out the work in the least possible time; a week being given in which to turn out a buggy. Yours, &c. G. H. B.

ANSWER TO QUESTION FIRST.—For a very rapidly-drying "rough stuff," we have used the following, with perfect success: Take equal parts of whiting, dry white lead and ochre, mix them up with a good drying japan, and run the mass through the mill, using sufficient turpentine to facilitate the grinding. When ground out, add rubbing varnish and dry ground pumice stone, in the proportion of about a teacupful of each to a half gallon of rough stuff, and thin down with turpentine. When ready to apply to a body, it must be brushed on quickly, with a short, stiff brush. If you desire it, three coats a day may be put on, and the body rubbed the second day after; or, put on one coat a day, and rub out the body the day following the application of the last coat. Where two or three coats are put on the same day, brush the first coat on thin, the second heavier, and so on. Keep the rough stuff covered with water when not in use.

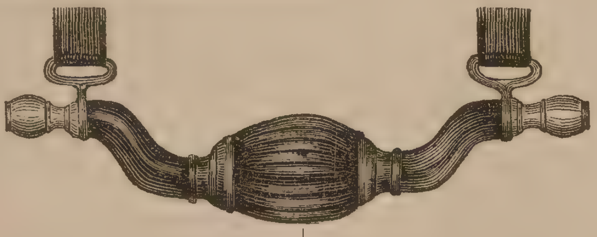
QUICK-DRYING PUTTY.—Dry white lead, mixed in rubbing varnish, dries firmly over night, so that it may be leveled down with lump pumice stone. It must be kept under water, and taken out in small quantities to prevent wastage. Or use dry white lead, red lead and whiting, mixed with japan. For puttying bruised places on a body which is about completed, whiting and lampblack, mixed in japan, will dry quickly, and not be so apt to stain when touching up on it.

In puttying, as well as painting, where a job is in a great hurry, recourse must be had to hard, firm-drying putty; but in using it, it will be found the better plan to putty the holes twice, for instance: if the job is in a hurry, and only two coats of lead are to be applied, putty the holes half full on the priming coat, and finish puttying them on the next coat of lead. By this means the putty dries through, and will not be so liable to shrink.

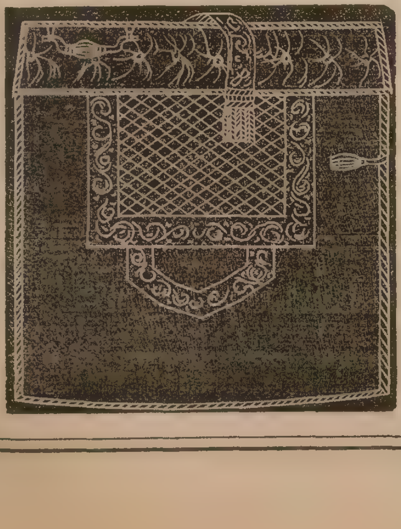
ELM CITY LANDAU.

The trimming in this beautiful carriage is in keeping with its general appearance. There is no effort at display, either in colors or workmanship, and this fact alone is evidence of its good quality. Brown satin head lining and brown Turkey morocco, finished with lace to match, completes the description of the goods employed. The backs and cushion tops have each large diamonds running through the centre; the intervening spaces, of course, finishing at the top and bottom. The falls are plaited. The inside of doors have broad lace across the top. The pocket space is finished with a small square squab, inclosed with broad lace. The squab contains ten buttons; four in the centre running crosswise. Below the squab the space is relieved by broad lace, formed into a shape agreeing with the form of the moulding on the outside of door. The carpet agrees in color with the rest of the trimmings. In a word, it is rich, not staring.

The inside handles, &c., are ivory. The pull handle, in this number, will indicate the pattern used. The ribbed centre forms the end finish on the inside handles.



The accompanying cut shows inside of landaulette-door trimming. The job we have in mind is trimmed in brown satin, with broad and narrow lace to suit. The upper part of door squabbed, as shown; the work beneath formed by bands of satin interwoven, and below this broad lace in the form given. The backs and cushions formed in large diamonds. Carpet of a light umber color, with circular figures in white, umber and black, which gives a lively appearance. The ivory trimmings were of the same pattern as mentioned in description of the landau.



CLARENCE COACH.

We notice, among this class of work, full squabbed head lining and quarters. Brown satin is very fashionable, and certainly has a rich appearance. Oval mirrors, concealed speaking tubes, card cases, and every appliance that can add to the comfort of the occupants.

For the Coach-Makers' International Journal.

JAMESTOWN, N. Y., Dec., 1869.

MR. EDITOR:—Seeing an article in your JOURNAL about a board for seaming on tops, or a contrivance, as your correspondent calls it, I can speak in its favor, having used it for about eight years, and have not found any device equal to it. Others, who have adopted the plan, also speak highly of it.

I formerly used what we call a trimmer's devil, but noticed that every time a top was sewed it wrinkled some, on account of its being sewed up too tight, and having no chance to gather, which I thought might be prevented by using a board rounded like the side quarter. I set to work and made a board similar to the one described by your correspondent, viz: 8 inches wide, rounded to the shape of the quarter, and beveled to ⅛ of an inch, bevel toward you. Then screw it to the side of the bench; stretch the top out tight lengthwise, as the stitching will draw it up a little; take your stool, sit down, and take your comfort, which you cannot do in sewing up a top in any other way; and then the leather, when drawn on, will be free from wrinkles.

Another little item which may be of service to trimmers, I will add here. A long cushion front will generally wrinkle; take a stick, ½ inch or ⅝ thick, beveled like the ends, and made a little shorter than the cushion front, and 1¼ inches wide. Insert it in the cushion after it is turned, and tack it with four or five tacks. Stuff, and it will leave the front smooth. I have made my cushions this way for several years, and find that they keep their shape until worn out. Generally before turning a cushion, I take three strings of tufting twine, and draw in between the welting cord and facing, thereby forming a loop, then turn the cushion and put my stick in through the three loops, and fasten it by tying. Yours, TACK DRIVER.

☞ If you want bent glass of any kind, send to Denman; he advertises in the JOURNAL.

Poetry.

THE BRIDE OF A DAY.

By the brink of a river our parting was fond,
But I whisper'd the words soft and low;
For a band of bright angels were waiting beyond,
And my bride of a day was to go.
Was to go from our shore with its headland of years,
On a water whose depths were untold;
And the boat was to float on the River of Tears,
Till it blent with an ocean of gold.

Our farewell was brief as the fall of a tear,
The moments like wing'd spirits flew;
When my bride whisper'd close that a shallop drew near,
And the beck of the boatman she knew.
Then I spoke in one kiss all the passion of years,
For I knew that our parting was nigh;
I saw not the end, I was blinded with tears,
And a light had gone out from the sky.

But I caught the faint gleam of an out-drifting sail,
And the dip of a silver-tipped oar;
And I knew by the low rustling sigh of the gale,
That her spirit had passed from the shore.
All alone in my grief I now sit on the sand,
Where so often she sat by my side;
And I long for the shallop to come to the strand,
That again I may sit by my bride.

◆

OVER AND OVER AGAIN.

Over and over again,
No matter which way I turn,
I always find in the Book of Life
Some lessons I have to learn.
I must take my turn at the mill,
I must grind out the golden grain,
I must work at my task with a resolute will
Over and over again.

We cannot measure the need
Of even the tiniest flower,
Nor check the flow of the golden sands
That run through a single hour.
But the morning dew must fall;
And the sun and the summer rain
Must do their part, and perform it all
Over and over again.

Over and over again
The brook through the meadow flows,
And over and over again
The ponderous mill-wheel goes.
Once doing will not suffice,
Though doing be not in vain;
And a blessing, failing us once or twice,
May come if we try again.

The path that has once been trod
Is never so rough to feet;
And the lesson we once have learned
Is never so hard to repeat.
Though sorrowful tears may fall,
And the heart to its depth be driven
With storm and tempest, we need them all
To render us meet for Heaven.

◆

HARD TIMES.

No business stirring, all things at a stand;
People complain they have no cash on hand.
"Dull times" re-echoes now from every quarter,
Even from father to the son and daughter.
Merchants cry out no money to be had,
And grocers say the times are very bad;
Mechanics work, but they can get no pay;
Beaux dress genteel, and ladies, too, are gay.
Cash very scarce—dancing twice a week—
Business dull—amusement still we seek.
Some live awhile—and then, perhaps, they fail,
While many run in debt and go to jail.
The females must have ribbons, gauze and lace,
And paint, besides, to smooth a wrinkled face;
The beaux will dress, go to the ball and play,
Sit up all night and lay abed all day;
Brush up an empty pate, look smart and prim,
Follow each trifling fashion or odd whim.
Are these bad times when persons will profess
To follow fashions and delight in dress?
No! times are good, but people are to blame
Who spend too much and justly merit shame.

FOURTEEN Buffalo girls have signed and sent this note to a modest young man: "We, the undersigned, have been comparing notes, and find that you have been equally sweet to one and all of us—have paid the same compliments to each, and made love in the same terms in every case. We are indignant at such duplicity and demand an explanation."

Youth's Department.

CHOICE OF TRADES.

A RECITATION FOR LITTLE BOYS.

BY MRS. M. B. C. SLADE.

First Boy.—When I'm a man, a man,
I'll be a farmer if I can—*and I can!*
I'll plow the ground, and the seed I'll sow;
I'll reap the grain, and the grass I'll mow;
I'll bind the sheaves, and I'll rake the hay,
And pitch it up, on the mow away!
When I'm a man!

Second Boy.—When I'm a man, a man,
I'll be a carpenter, if I can—*and I can!*
I'll plane like *this*, and I'll hammer, *so!*
And *this* is the way my saw shall go.
I'll make bird houses, and sleds, and boats;
And a ship that shall race every craft that floats!
When I'm a man!

Third Boy.—When I'm a man, a man,
A blacksmith I'll be, if I can—*and I can!*
Clang, clang, clang, shall my anvil ring;
And *this* is the way the blows I'll swing.
I'll shoe your horse, sir, neat and tight;
Then I'll trot round the square to see if it's right!
When I'm a man!

Fourth Boy.—When I'm a man, a man,
A mason I'll be, if I can—*and I can!*
I'll lay a brick this way, and lay one *that;*
Then take my trowel and smooth them flat;
Great chimneys I'll make; I think I'll be able
To build one as high as the Tower of Babel!
When I'm a man!

Fifth Boy.—When I'm a man, a man,
I'll be a shoemaker, if I can—*and I can!*
I'll sit on a bench, with my last *held so;*
And in and out shall my needles go.
I'll sew so strong that my work shall wear,
Till nothing is left but my stitches there!
When I'm a man!

Sixth Boy.—When I'm a man, a man,
A printer I'll be, if I can—*and I can!*
I'll make pretty books, and perhaps I shall
Print the stories in THE LITTLE CORPORAL!
I'll have the first reading; ah! won't it be fun,
To read all the stories before they are done?
When I'm a man!

Seventh Boy.—When I'm a man, a man,
A doctor I'll be, if I can—*and I can!*
My powders and pills shall be nice and sweet;
And you shall have just what you like to eat!
I'll prescribe for you, riding, and sailing, and such;
And, 'bove all things, you never must study too much!
When I'm a man!

Eighth Boy.—When I'm a man, a man,
I'll be a minister, if I can—*and I can!*
And, once in awhile, a sermon I'll make,
That can keep little boys and girls awake.
For, ah! dear me! if the ministers knew,
How glad we are when they do get through!
When I'm a man!

Ninth Boy.—When I'm a man, a man,
A teacher I'll be, if I can—*and I can!*
I'll sing to my scholars, fine stories I'll tell;
I'll show them pictures, and, well—ah! well,
They shall have some lessons—I s'pose they ought;
But oh! I shall make them so very short!
When I'm a man!

Tenth Boy.—When I'm a man, a man,
I'll be school committee, if I can—*and I can!*
'Bout once a week I'll come into school,
And say, "Miss Teacher, I've made a rule,
That boys and girls need a great deal of play;
You may give these children a holiday!"
When I'm a man!

Eleventh Boy.—When I'm a man, a man,
I'll be President, if I can—*and I can!*
My uncles and aunts are a jolly set;
And I'll have them all in my cabinet!
I shall live in the white house; I hope you all,
When you hear I'm elected, will give me a call!
When I'm a man!

All.—When we are men, are men,
I hope we shall do great things, and then,
Whatever we do, this thing we say,
We'll do our work in the very best way,
And you shall see, if you know us then,
We'll be good, and honest, and useful men;
When we are men.

Little Corporal's School Festival.

Remedies and Receipts.

Cement for Broken Glass or Crockery.—Take the white of an egg and very quick lime.

Antidote for Arsenic.—Swallow the whites of three or four eggs immediately.

To Prevent Wounds from Mortifying, sprinkle sugar on them.

A cement, made by dissolving rubber, cut fine, in benzine, may be used to mend rubber boots and shoes. This cement will firmly fasten on a rubber patch.

Composition for Grafting.—Take one part tallow, two parts beeswax, and four parts resin; melt it together, turn it into water, and mix it as shoemakers do wax.

Lemon Pudding.—Beat the peel and juice of a lemon in a mortar, with the yolks of four eggs and a quarter of a pound of white sugar; mix all with five ounces of butter, warmed, and lay it in a dish lined with crust; when cold, turn the pudding out and serve.

Fish.—Fresh fish, when boiled, should be placed in cold, and shell fish in boiling water. Fish that are not stale may be known by the red gills, eyes bright, and flesh firm. When the gills appear pale, eyes dull, and body flabby, they have been from the water too long.

Remedy for Neuralgia.—The following is at least worth trying: It is said that the juice of one lemon a day, taken in water, will cure the most obstinate case of neuralgia. No sugar should be taken, as it has a tendency to counteract the effects of the lemon juice.

Giblet Pie.—Clean duck or goose giblets, and stew them with sweet herbs, an onion and black pepper, in a small quantity of water till nearly done. If they are not sufficient to fill the dish, lay a tender beefsteak at the bottom, skin the giblets, and fill the dish with the liquor they were stewed in; when it is done, put in a quarter of a pint of cream.

Sauces and Creams for Puddings.—Take equal quantities of sugar and molasses, boil them together, and stir in a little flour.

Take the juice of an orange, a cup of sugar, and the same of good cream.

Beat two eggs well, then add a cup of stewed apples, and a cup of sugar; beat all well together.

Mince Meat.—Take two pounds of scraped beef, free from skin and strings, three pounds of chopped apples, four pounds of shred suet, six pounds of currants, picked and dry, the peel and juice of two lemons, a pint of sweet wine, a nutmeg, a quarter of an ounce of cloves, the same of pimento and of mace, in fine powder; mix these well, press them into a deep pan, and keep it covered in a cool dry place.

Oiled Furniture.—Oiled furniture, that has been scratched or marred, may be restored to its original beauty simply by rubbing boiled linseed oil, used by painters, on the surface, with a wad of woolen rags. Varnished furniture, dulled, may be similarly restored by the use of a varnish composed of shellac dissolved in alcohol, applied in a similar manner. Common beeswax, rubbed over furniture, and heated by the friction of a woolen wad, briskly used, is also an excellent furniture polish.

A New Whitewash for Walls.—Soak one-fourth of a pound of glue over night in tepid water. The next day put it in a tin vessel, with a quart of water, set the vessel in a kettle of water over the fire, keep it there till it boils, and then stir until the glue is dissolved. Next put from six to eight pounds of Paris white into another vessel, add hot water and stir until it has the appearance of milk of lime; add the sizing, stir well, and apply in the ordinary way while still warm. Paris white is sulphate of baryta, and may be found at any drug store.

Felons on the Finger.—Many persons are liable to extreme suffering from felons on the finger. These affections are not only very painful, but not unfrequently occasion permanent cripples of the member affected. The following simple prescription is recommended as a sure cure for the distressing ailment: "Take common rich salt, such as is used for salting down pork or beef, dry it in an oven, then pound it fine and mix with spirits of turpentine in equal parts. Put it on a rag and wrap around the part affected, and as it gets dry put on more, and in twenty-four hours we are cured: the felon is dead." It will do no harm to try it.

Scraps of Humor.

A writ of attachment—a marriage certificate.

Lucy Stone likens boys to vinegar—the more "mother" in them the sharper they are.

Fremont's recent illness is supposed to have been caused by a mistake in parting his hair.

Why is drawing from nature infectious? It's sketching.

A good way to find a woman out—call when she isn't home.

Love is sed to be blind, but I kno lots of fellows in love who kan see twice as much in their galls as I can.—*Josh.*

If the petrified giant were to wake up suddenly, what great African traveler would he resemble? Living-stone.

Oskaloosa, La., has a Lazy club, which fines its members a dollar for speaking to a man on the street without leaning against a wall.

An old lady on a train, not far from Lafayette, hearing the brakeman sing out "Eubank's Cut," sallied to the door and asked, "Is he hurt much?"

When hens la 5 eggs a day, and men cease to brag and wimmin cease tew cackle, then injin summer draws ni, then the millennum ain't fur oph.—*Josh Billings.*

A stump-speaker exclaimed: "I know no north, no south, no east, no west, fellow-citizens!" "Then," exclaimed an old farmer in the crowd, "it's time you went to school and larnt jography."

A bachelor, returning the other evening from an assembly in a crowded car, declared, with a groan, that he had not the slightest objection to "rings on his fingers," but had a most unequivocal aversion to "*belles* on his toes."

A MAN and his wife stopped at a St. Louis hotel, where codfish balls were legal tender. He broke one, smelled of it, and thus addressed the partner of his stomach: "Matilda, don't eat them doughnuts. Something has crawled into this one and died."

SUPPOSE a canal-boat heads west-north-west for the horse's tail, and has the wind abeam with a flaw coming up in the south, would the captain, according to maritime law, be justified in taking a reef in the stovepipe without asking the cook?

A SHOEMAKER with one eye complained that one of his lamps did not burn. One of his shopmates, who is a genuine son of the Emerald Isle, with astonishment exclaimed: "Faith, and what do you want with two lamps? You haven't but one eye!"

"I WILL have order!" shouted the captain of a schooner to his refractory cook. "If you won't cook the dinner, I'll—do it myself. I will have discipline on board of this 'ere vessel!"

IT is told of a young lady that when her jealous admirer sent back her letters, with a request that she would return his, she answered that she regretted that she could not comply immediately, as she had lent them to a young gentleman to read.

"MA," said a little urchin, peeping from beneath the bed-clothes, "I am cold; I want some more cover on the bed." "Lie still, my dear," said the mother, "until your sister comes home from church; she has got the comforter for a bustle."

A FRENCHWOMAN who had lost one of her eleven sons, chaffered with the undertaker about the price of the burial, saying: "Now, look here, sir, you mustn't be hard with me; I shall be a good customer; I've got ten children more." This is French, indeed.

A LADY advertises for sale one baboon, three tabby cats and a parrot. She states that, being now married, she has no further use for them, for the reason that their amiable qualities are combined in her husband—and their disagreeable characteristics in herself, adds the gentleman alluded to.

"BETSY, go down and stir up that apple butter." Betsy approached the huge kettle containing the above mentioned article. "Why, marm, what is this?" she asked, fishing up a dark substance. "Lor for me! if that ain't that blister poultice that cum'd off my back—I had sarched and sarched for that air!"

A NAUGHTY little boy, being told by his mother that God would not forgive him, if he did something, answered: "Yes he would too—God likes to forgive little boys—that's what He's for." Of course that boy was a Universalist, from the shell, and had about as clear a notion of what God was *for*, as many a profound theologian or metaphysician.

THE woman who dared lives in Illinois. She worried a promise of marriage out of a Sunday evening caller, invited him to a party a few days afterward, showed him a marriage certificate containing his name, and, stroking him under the chin, said: "Now, Henry, you are going to fulfill your engagement!" Despite Henry's excuses he was a married man in fifteen minutes.

AN exchange says: "We were compelled to refuse an offer of job printing the other day by a man way back, who innocently called to get some postage stamps printed. He was quite disappointed because we could not do it; he wanted 'em real bad, to put on a letter he writ to a gal, and it cost too much to buy 'em of the post office fellers."

A NEW ORLEANS wife, left at home one evening by her husband who "had business down town," accepted a friend's escort to the theatre. The fates decreed that her husband should occupy the next seat, with another lady, the occasion of his urgent business. As soon as the wife made the discovery she leaned over and whispered viciously; "Charles, who is that hussy you have with you?" "Sister of that fellow you have with you." There was no need of further explanation.

WHAT WON'T PRINTER'S INK DO?—A young married man advertised in our "twenty-five cent column" for a girl, and the very next day was the happy father of a boy! If he didn't obtain a girl he got the next thing to it, and was perfectly satisfied with the result of the advertisement. We haven't the least doubt but if he had commenced advertising sooner he would have been the happy father of a girl. There is nothing like a judicious use of printer's ink.

A NEW ORLEANS reporter was being shown through the Insane Asylum the other day, when he encountered a very pretty blue-eyed damsel, who at once rushed into his arms, with the exclamation, "Oh, my dear husband!" The reporter wished to soothe the agitated feelings of the little unfortunate, and stroked her hair caressingly as he replied, "Why, my little dear, did you think I would stay away from you?" "No," she innocently replied, "you always liked to kiss me." "But you know you are insane, my dear," he said. "Yes," she replied wearily, "that's the reason I kiss you!"

A YOUTHFUL applicant for a certificate to teach school, presented himself before the Superintending School Committee of a town in Maine, and after having answered correctly several questions in mathematics, he was asked—"In what year did Columbus discover America?" The young man paused, scratched his head and replied, "Well, Mister, you've got me now." "Was it before or after the birth of our Saviour?" continued the committee man. The youth spent a moment in thought, and then raising his huge fist, and striking it upon the desk, exclaimed, "*You've got me again, by thunder!*" The certificate was not granted.

HERE is an affecting scene on a ferry-boat crossing a rough river:

"Oh, Henry, this is terrible!"

"Yes, it is," he responded, "but lean on me and I will protect you."

"Do you think it will be as rough as this all the way across?"

"I do," responded Henry.

"Then I guess I'll have to lean on you," returned the lady.

"For life?" whispered Henry, turning pale at the thought of refusal.

"I—I—don't know—the water is awful rough—I guess ye—yes—you'd better ask papa."

A FEW days ago a very starchily-dressed individual called at an out-of-the-way shop on Howard street, New Orleans, over which swung the sign of Dr. Jeffries. "Is the doctor in?" he inquired of a dilapidated colored man who answered his summons. "He am dat, sar," was the smiling rejoinder. "Tell him I think I have symptoms of small-pox, and wish to consult him." The whites of the negro's eyes grew intense, and his dusky complexion assumed rapidly a creamy hue. "Golly, boss, what you say?" "Tell the doctor I'm sick with the small-pox, and wish to see him." The astonished African gave a wild leap, and darting through an inner door, slamming it in the visitor's face, cried out, "Leave dis yer house; I don't want no small-pox!" "But the doctor?" "Golly, boss, I's the doctor, but I ain't good at small pox."—*N. O. Picayune.*

Miscellaneous.

CONNECTICUT already reports 300 divorces this year, with several counties to hear from.

HORACE GREELEY is so much opposed to capital punishment that he cannot tolerate a paper hanger.

A CARRIAGE builder, of St. Louis, has received orders to build twenty street cars for the city of Memphis.

THE affection of woman is the most wonderful thing in the world; it tires not, faints not, cools not. It is like the naphtha that nothing can extinguish but the trampling foot of the tyrant, Death.

A MACHINIST belonging to the arsenal of Naples has invented an instrument which indicates with precision the velocity with which a vessel is traveling, the changes in the direction, and the deviation of the compass.

FANNY FERN is after the "pretty man" of the period, who scents his handkerchief, twirls a switch cane, parts his hair in the middle, and places himself in a conspicuous place that the ladies may admire him. We all know the puppy.

THE following will be exceedingly useful, as it tells how to get rid of stumps: "Bore a hole in the stump with an auger; fill it full of petroleum, and let it stand for four days. Then set fire to the stump, and it will burn out like the wick of a candle." This has been successfully tried by a reliable agriculturist.

AMONG the patents recently received in Washington, and attracting special attention, is one involving a new and important principle in the machinery of saw mills. Recent experiments demonstrate the fact that this invention will cause a saving of seventy-five per cent. over the old system of sawing lumber. The lumbermen of Maine and Wisconsin are examining the invention.

A GENUINE Yankee, at Lisbon, Conn., who wanted to put a water pipe through a drain several feet below the surface, without digging up the drain, tied a string to a cat's leg, thrust her into one end of the drain, and giving a terrific "scat," the feline quickly appeared at the other end. The pipe was drawn through the drain by means of the line, and an expense of ten dollars saved by the operation.

SIXTY years ago, or thereabout, an obscure inventor filed in the archives at Washington his description of an armor plated ship of war. It amounted to nothing in his day, and his neighbors, probably, mocked the futile dreams of the man who talked of bullet-proof vessels. Yet long after he was gathered to his fathers, his plans stood his country in great stead, and to-day they are found in practice in all the navies in the world.

MANY of the best teamsters protect the breasts of their horses by a piece of cloth about two feet square, hanging down from the lower end of the collar. This is an excellent practice in cold weather, as the most important part of the animal is constantly sheltered from the cold wind, especially when traveling toward a strong current. The forward end of horse blankets should be made as closely around the breast of a horse as our garments fit our bodies.

A NOVEL fire alarm has been introduced into a hotel in Chicago, at a cost of $1,000. It operates as follows: in the office of the hotel is a register or dial, with a number on a sort of key, representing each room in the house. Above the dial is a relay, such as is used in ordinary telegraphing, and above that is an alarm bell, connected with the wires, which lead to all the rooms; in each room is a bulb, containing mercury, so gauged that when the heat in the apartment reaches one hundred and ten degrees the mercury rises, touches the wire, and the circuit is completed. This rings the alarm in the office, and at the same time indicates the room in which is the undue quantity of heat.

BEAUTY OF THE HEAVENS.—How delightful to contemplate the heavens! We can find no limit, no boundary. Millions of miles may be traversed from any given point of space, and still the heavens appear illimitable. Infinity is stamped upon them. And with what gorgeous splendor and magnificence that curtain is adorned! In every direction it is studded with worlds, suns and systems, all harmoniously moving in perfect and undeviating obedience to the Almighty will. The soul, in such a contemplation, is absorbed. Earth ceases to hold us with its silver chain. The mind, set free from groveling pursuits, mounts up as on the wings of an eagle, and soars away through the immensity of space, surveying and admiring the innumerable revolving orbs, which, like so many crowns of glory and diadems of beauty, bespangle that firmament "whose antiquity is ancient days," and which so wonderfully attest that "the hand that made them is divine." The immense distance of the fixed stars claim our attention, and awakens the most enrapturing feelings in the mind. Reason is obliged to give the reins to imagination, which tells us that there are stars so distant that their light travels, no ray from them has yet reached us.

EXCITEMENT AND SHORT LIFE.—The following, by an unknown writer, accords with our observation: "The deadliest foe to man's longevity is an unnatural and unreasonable excitement. Every man is born with a certain stock of vitality which cannot be increased, but which may be husbanded or expended as rapidly as he deems best. Within certain limits he has a choice, to live fast or slow, to live abstemiously or intensely, to draw his little amount of life over a space, or condense it into a narrow one; but when his stock is exhausted he has no more. He who lives abstemiously, who avoids all stimulants, takes light exercise, never overtasks himself, feeds his mind and heart on no exciting material, has no debilitating pleasure, lets nothing ruffle his temper, keeps his 'account with God and man squared up,' is sure, barring accidents, to spin out his life to the longest limit which it is possible to attain; while he who lives intensely, who feeds on high seasoned food, whether material or mental, fatigues his body or brain by hard labor, exposes himself to inflammatory disease, seeks continual excitement, gives loose reign to his passion, frets at every trouble, and enjoys little repose, is burning the candle at both ends, and is sure to shorten his days."

WOMEN.—We look back upon the man as the representative of intellect, and the woman as the representative of affection; but each shares the characteristics of the other, only in the man one predominates, and in the woman the other. We know women as affectionate, as religious, as oracular, as delighting in grace and order, possessed of taste. In all ages, woman has been the representative of religion. In all countries, it is the women who fill the temples. In religious movement the woman has been an active and powerful part, not only in those in the most civilized, but in the most uncivilized countries; not less in the Mahommedan than the Greek and Roman religions. She holds man to religion. There is no man so reprobate, so careless of religious duty, but that he delights to have his wife a saint. All men feel the advantages that abound of that quality in a woman. My own feeling is, that in all ages woman has held substantially the same influence. I think that superior women are rare, as superior men are rare. I think that women feel when they are in the press, as men of genius are said to do among energetic workers—that they see through all these efforts with finer eyes than their noisy masters. I think that all men in the presence of the best women feel overlooked and judged, and sometimes sentenced. They are the educators in all our society. Through their sympathy and quickness, they are the proper mediators between those who have knowledge and those who want it.

Periodicals.

AMERICAN ARTIZAN comes promptly, and is always welcome. Every mechanic should take it. Address Brown, Coombs & Co., 189 Broadway, New York.

SCIENTIFIC AMERICAN, Dec. 25th, with supplement, containing a large and fine engraving of the Railway Bridge over the Susquehanna River, at Havre-de-Grace; also, a calendar for 1870. Large prizes in money are offered to the getters-up of clubs. Address Munn & Co., Publishers, 37 Park Row, New York.

ZELL'S ENCYCLOPÆDIA should be in the possession of every reader of the JOURNAL. The cost is trifling, being but ten cents per number, issued weekly; semi-monthly parts fifty cents. Eighty weekly numbers are now ready, which may be all taken at once, or any part of them, as may be desired. Sample copies sent for ten cents. Address "Office Zell's Encyclopædia," 17 and 19 South Sixth street, Phila., or any of his agents.

THE LITTLE CORPORAL'S SCHOOL FESTIVAL, for January, 1870, is devoted exclusively to school festivals, entertainments, dialogues, recitations, readings, tableaux, charades, &c. This is a valuable work, and should be in the hands of a large number of our patrons. Read a recitation for little boys, entitled "Choice of Trades," which may be found in the Youth's Department. Published quarterly. Price, 50 cents a year. Single copies, 15 cents. Address Alfred L. Sewell & Co., Publishers, Chicago, Ill.

THE PHRENOLOGICAL JOURNAL, for 1870, has been received. It appears in a handsome magazine form, new type, numerous illustrations, and with a variety of reading matter, much of it of a peculiar kind. This journal has reached its fiftieth volume, and is daily increasing in popular favor. It contains Hon. S. S. Fisher, of the U. S. Patent Office; De Lesseps, of the Suez Canal; President Cespedes, of Cuba; George Peabody; Dr. Tischendorf, the eminent Biblical scholar; portraits of the Kaffir and Australian races, Progress of Science, Brain Waves, The Wasp Waist, Natural History, Our Agricultural Resources, The Sponge, its Origin, Growth and Uses. Terms, $3 a year, or thirty cents a number. Address S. R. Wells, 389 Broadway, N. Y.

THE INDEPENDENT, of December 2d, 1869, is received. It is jubilant over its twenty-first birth day. Having surmounted the mountains of difficulty that have attended its establishment, and now being in easy circumstances, it has good cause to give thanks, and call upon others to rejoice with them. It contains two large engravings, called "The Independent's Charge on the Modern Jericho," and "The Birth-day Banquet." In the first, the angel of Truth is blowing the ram's horn, in front of her the walls have tumbled down, the rocks showing that Slavery, Secession, Rebellion, Sectarianism, Bigotry, &c., are brought low. Vanity Fair, and a towering dome in the distance, marked Ecumenical Council, are standing, but must share the same fate. In the second, Brother Jonathan, holding a glass of water, is about to drink to the prosperity of the *Independent*. The company is made up of several notables—Grant, Colfax, Greeley and others. The *Independent* employs the best talent in this country, not an occasional contribution, but weekly, on a large scale, at an immense outlay. Address Henry C. Bowen, Publisher and Proprietor, Box 2787, New York City.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

WANTED—A purchaser for my shop and stock. I have a good trade, and no opposition, in a flourishing town of 4,000 inhabitants; on two railroads. Good reasons given for wanting to sell. Address W. R. Bingham, El Paso, Ill.

WANTED—Situation by a first-class carriage trimmer, from England, who has had several years' experience as foreman trimmer in some of the largest manufactories in London. Is practically acquainted with every style, and can introduce all the latest in carriage trimming, both light and heavy work. Address,
R. D. W.,
3632 Haverford st., West Philadelphia.

WANTED—A purchaser for my stock and tools. I have a large custom, no opposition, a good shop, low rent. Reason for selling is bad health. Inquiries must be made soon.
Address, T. W. SMITH, Mercer, Pa.

WANTED—Numbers 2, 4, 5 and 6 of Volume III of this JOURNAL, for which a like number of copies of either Volume IV or Volume V will be returned. The person sending will specify the numbers desired.

WANTED—Every Carriage-Maker and Painter to send for our Book of Ornaments, containing over 100 new and elegant designs of Carriage and Buggy Ornaments. Sent by mail to any address on receipt of 50 cents. Address Chas. Palm & Co., 120 Main street, Cincinnati, Ohio.

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CASH
Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY
SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, December 18, 1869.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.
Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.
Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50
Axles, Carswell's Wilmington, or Brinton's Phila. C. H. Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.
Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.
Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.
Basket-wood imitation, for panels, per foot 60c.
Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.
Bolts, Phila., 40 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.
Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.
Buckram, per yard, 16 to 20c.
Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.
Castings, mall, per lb., 13c.
Cord, seaming, per lb., 25c.
Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
" body, per yard, indigo wool-dyed, $3.75 to $4.50.
Coteline, per yard, $4 to $8.
Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.
Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30; English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.
Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.
Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.
Drugget, felt, per yard, $1.35 to $2.
Enameled cloth, per yard, muslin, 5-4, 31c.; 6-4, 45c.; drilling, 5-4, 44c.; 48 inch, 46c.; 6-4: 62c.; duck, 5-4, 58c.; 50 inch, 63c.; 6-4, 70c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 55c.; 48 inch, 60c.; flock drill, 48 inch, 90c.; do., muslin, 80c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.
Felloe plates, wrought, per lb., 14c.
Fifth wheels, Cincinnati pat., ea., ⅝, $1.37; ¾, 1.50; New York pat., ⅝, $1.12; ¾, $1.20.
Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.
Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.
Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.
Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $3.75.
Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.
Lamps, per pair, fine, $15 to $30.
Leather, per ft., dash, No. 1, 13½c.: do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 25c.; do., No. 2, 22c.; enam. trimming, 23c.
Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.
Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.
Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.
Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.
Moss, per lb., 10c. to 15c.
Name plates, per do., en., German silver, $4 to $4.50.
Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
" Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $2.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1,50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.
Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2.15; 1⅛, $2.50; 1¼, 2.65.
" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
" ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.
Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $12
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.
Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.
" Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 23c.; 1½. 3, 4 and 5 plates, not shorter than 33 inch, 22c.; shorter than 33 inch, per lb. extra, 3c.
" Bright oil-tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.
" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.
Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.
Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.
Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.
Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.
Top holders, Thomas patent, buggy, $5 each; extension, $7 each.
Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.25; Thomas' wrought with plated nuts and rivets, $1.35.
Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.
Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.
Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.
Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,
Tufts, per gross, common worsted, 18c.
Twine, tufting, per lb,, No. 16, 50c.; best mattress, 85c.
Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.
Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.
Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.
Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.
Whip socket fasteners, $3.00 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.
Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash, red oak and common hickory, per sett, 1,
" 1⅛ 1¼, $1.25; 1⅜ $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2.25 per set.

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set:
" " double " $4.50 "

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in. and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.75; fine crimson or claret lake, per lb., $3.50; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deed red for striping and fine carriage painting.) Vermillions—English pale, $1.40; deep, $1.30; Ger. gotn. pale, $1.40; deep, $1.30; Chinese, $1.30; Trieste, $1.25; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 13½c.; Colorado lead, 12½c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 14c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.10; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c.; 00. 75c.; 000, 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, for balance of present volume, for one dollar each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

HARPER, HENRY, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winsted, Conn.

Brush Manufacturers.

*THUM, CHARLES D., 150 North Third street, Phila.

Carriage Body Manufacturers.

EVANS, C., 59 Rosette street, New Haven, Conn.
NORCROSS, H. S., (light,) 1712 Coates street, Phila., Pa.
SHEW, LEVI W., 127 Park street, New Haven, Conn.
TOWNSEND, C. T., 116 Dixwell av., New Haven, Conn.

Carriage Bolt Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDON, A. & M., 22d street, above Vine, Phila., Pa.
*SCOTT & DAY, 38 North Third street, Phila., Pa.
SHIELDS, WM., 23d street, above Race, Phila., Pa.
*SKELLEY, T., 24th st., below Callowhill, Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.

Carriage Castings.

*FITZGERALD & FLAGG, 218 N. Third st., Phila., Pa.

Carriage Wheels.

BROWN, S. N. & CO., Dayton, O.
LA FARGE, I & J., Rahway, New Jersey.
*WOODBURN, SMITH & CO., 2d & Green, St. Louis.

Coach Hardware and Trimmings.

*ATWATER, H., 1625 Market st., Phila.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
HIGH, J. J. & L., 156 Grand street, Rahway, N. J.
KEIM, GEO. DEB., 162 North Third street, Phila., Pa.
KENNEDY & CO., 305 Arch street, Phila., Pa.
*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*ROUSE, J. G. & CO., 4th & Arch sts., Phila.
*SCOTT & DAY, 38 North Third street, Phila.
SNYDER, W. & A. J., 115 North Third st., Phila.

Carriage Draftsmen.

*MULLER, A., 142 Second street, New York City.

Coachmakers' Tools.

WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

Coach Lamps.

*CAREY & POST, 234 Carter st., Phila., Pa.
*NIXON & WIGLEY, 39 North Seventh street, Phila.

Felloe, Spoke and Shaft Manufacturers.

*GARRETT. KENT & CO., Shipley st., Wilmington, Del.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Fifth Wheel Manufacturers.

HAYDEN & LETCHWORTH, Auburn, N. Y.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*SCOTT & DAY, 38 North Third street, Phila.
*WOODBURN, SMITH & CO., 2d and Green, St. Louis.

Iron Merchants and Mannfacturers.

*ATWATER, H., 1625 Market st., Phila.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.

Ivory and Horn Turners.

*ATWATER, H., Agent, 1625 Market st., Phila.
HACKERT & CO., 99, 101 and 103 E. Houston st., N. Y.

Paint and Varnish Brushes.

*FELTON, RAU & SIBLEY, 136 North 4th st., Phila.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*THUM, CHAS. D., 150 North Third street, Phila.

Permanent Wood Filling.

*VALENTINE & CO., Boston, Mass.

Rubber Enameled Carriage Cloth.

*ODORLESS RUBBER CO., 19 Park place, N. Y. City

Paints, Oils and Varnish.

*FELTON, RAU & SIBLEY, 136 N. 4th street, Phila.
LUCAS, JOHN & CO., 141 North Fourth street, Phila.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., Phila

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

*CROWELL, DAVID, Wood Works, Rahway, N. J.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Spring Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*GARRETT, KENT & CO., (Agents,) Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.

Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

*ATKINSON. W. & CO., 1270 Broadway, New York.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

*FELTON, RAU & SIBLEY, 136 N. Fourth st., Phila.
*GARRETT, KENT & CO., Wilmington, (Harland's.)
KEYSTONE VAR. & JAP. WORKS, 313 Race st., Phila.
*MINETT & CO., 60 Pearl st., N. Y., & 7 S. 10th st., Phila.
PARKER & GILLESPIE, 228 Pearl st., New York City.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*SMITH, EDWARD & CO., 161 William street, N. Y.
*VALENTINE & CO., Boston, Mass.

AYRES, LIPPINCOTT & CO.,
WHOLESALE DEALERS IN
CARRIAGE MATERIALS AND SADDLERY HARDWARE,
No. 49 NORTH THIRD STREET,
PHILADELPHIA.

We invite the attention of Manufacturers and Dealers to our complete stock of goods in the Carriage line, which we propose to sell at the lowest market rates.

Our facilities in the purchase of goods, in large lines, often enables us to supply them below Dealers and Manufacturers **PUBLISHED** prices.

INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

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COMPETITION.

Competition is a contest or rivalry between individuals, companies or governments, for the purpose of profit. It is, in reality, "the life of trade," when carried on within reasonable bounds, otherwise it is ruinous to the contestants. The desire of possession is natural to every human being, and sufficient selfishness has been added to make us careful of our own, and careless to others' interests, to a certain extent.

It would be an endless task to attempt the enumeration of the forms in which competition presents itself. No trade, profession or calling that can be named but what has to be on the alert, lest those who may be in the same line discover or purchase some improvement which may work injuriously, by taking money out of their pockets, and placing it in the purse of another. There was a time when men of superior skill might reap the full benefits of their productions, but the introduction of steam and labor-saving machinery have placed all nearer on a level.

The manufacturer of to-day, who does not employ the most perfect machinery, need not attempt to compete with his more enterprising rival. He may struggle along in a half-dead-and-alive manner, but must finally feel himself pushed aside to make room for those who are fully alive to their vocation. Among carriage-makers there is a strong spirit of rivalry, which will not fail to show itself in the country town where there are but two shops, as well as in the metropolis, amongst the heavy manufacturers, and on down to those who run but one fire.

Builders very often allow themselves to be led away into bankruptcy, by being more anxious to sell for the sake of selling, rather than to wait and obtain a living price. They will sell at a sacrifice, rather than allow a customer to go elsewhere, especially if he should mention the name of a rival, stating that Mr. So-and-So would furnish a vehicle at the price he was now offering. This is all wrong, and, by whomsoever practiced, if persisted in, must lead to failure.

The builder should know the first cost of every carriage in his ware-room, and, having added a living per cent. to that, obtain as much more as possible, yet never take less than first cost. The prices of carriages built in different parts of the country necessarily vary, on account of the advantages one section may have over another, in securing stock and labor cheaper. This fact leads to rivalry between cities; desperate struggles are made to build up a trade, where natural advantages may be all against a place, and a few years only are necessary to prove the folly of the attempt.

This kind of competition is ruinous, evidence of which is being continually brought to our notice. Prices vary so much between the large cities, both for new work and repairs, that builders in those towns, which are further inland, are often at a loss to know what value they should set on their finished work; and the journeyman is equally in the dark as to what would be a fair price for *his* labor. Hence, we are repeatedly asked about the prices charged in Philadelphia for certain kinds of vehicles, or what rate the journeyman should receive as a fair compensation. These questions we endeavor to answer, knowing, at the same time, that it is impossible to give a true estimate, there being no standard rates to work from.

When builders in the same section of country, where there are equal advantages offered in producing work for market at a uniform rate, agree on a scale of prices, we will then be able to furnish a list that would do injustice to no one. In the cities we find a great many small shops struggling to get a foothold, which are compelled to take whatever may be offered, and between this class and the princes in the business, are those who lay some claim to respectability, yet who have no settled prices on their work.

In answering such questions as, "What is the price for all kinds of iron or wood work, painting and trimming?" a satisfactory reply cannot be given, there being such a variety of circumstances under which the value of labor may be viewed. A comparison between two first-class shops would probably disclose the fact, that one set of hands would be required to perform a certain amount of extra work in order to please the particular fancy of their employer, and, for this extra labor, would receive one-fourth more wages than those employed at a factory where equally serviceable work was built, yet deficient in certain little matters not affecting the real value of the carriage to the consumer. Here the difference in wages would be balanced by the unequal amount of labor required.

Again, two shops may require of their hands an equal amount of work on each part, and yet, to piece-workers, more money could be made in one than the other, at less wages, on account of the facilities afforded in producing the work. The wood-worker, in having an abundance of seasoned stuff, kept in a dry and convenient place, the timber sawed and planed, a warm shop, &c. The blacksmith, by being provided with the sizes of iron and steel, requiring the least amount of labor to forge the parts, and not to be compelled to draw down a heavy bar, in order to obtain the size required. The trimmer, by being supplied with good stock and an abundance of it, so that he should not be compelled to waste his time for the want of a little bit of muslin, hair, or a certain kind of leather best adapted to his wants. This will apply also to the painter.

It would not be just for an employer to demand of a piece-worker an unusual amount of work for a very low price; neither would it be fair for the journeyman to claim an exorbitant price for his labor, when surrounded with every convenience for completing his work in a short time. The question of wages, and piece-work prices, can never be settled satisfactory without a bill of prices, agreed upon between the employer and employee, and, even then, there would be conditions in which disputes would arise.

In a country town, where rents are low and living cheap, a man can afford to take a trifle less for his labor; yet, if his employer receives city prices for finished work, city prices should be paid the journeyman. Wages have much to do in the matter of competition between rival manufacturers; those who pay the least for skilled workmen being able to under-sell all others. When this discovery is made by those placed at a disadvantage, their first attack will be at the wages paid their hands, the cost of the carriage must be reduced by some means, and, as the material required in its construction cannot be bought at a less figure than that charged by the dealer in carriage goods, the workman must submit to a reduction, or seek other employment.

Competition should not be attempted between widely separated localities, where one section has a decided natural advantage over the other. Living profits should be looked after, regardless of what other firms may or may not obtain for their work. Cincinnati or St. Louis would be foolish to attempt competing in price with New Haven and other Eastern cities. But, by building equally as good or superior work, they may supply a large demand in their section, and obtain handsome profits.

Were every kind of business conducted on a safe basis, and less jealousy and rivalry manifested, there would be fewer failures to record.

ADVERTISEMENTS.

While we refer with pleasure to new advertisements in the Journal, we take especial pride in noticing those who have tried this medium of bringing their wares before the public, and having become fully satisfied of the benefits derived, order the same continued; in fact, some of them for the second and third time, and in a few instances leave an order to continue so long as the Journal may be published. While we appreciate their patronage on account of its pecuniary value to us, it is a source of pleasure to any publisher to know his advertisers are receiving ample returns for their investments.

We notice this month some of those who have ordered a renewal of their advertisements, and hope our readers will not fail to remember them when in want of materials in their line.

Minett & Co., makers of Varnishes and Japans, offices No. 60 Pearl street, New York, and No. 7 South Tenth street, Philadelphia. Also Enameled Leather Jet for refinishing buggy tops, and Black Coach-Body Japan.

C. Schrack & Co., (established in 1816,) are also manufacturers of Coach Varnishes and Japans, and claim to have the most reliable article of each in the market. This is an old and reliable house. They are importers and dealers in Fine Colors and Coach Painters' Supplies, and sole proprietors and manufacturers of "Wright's" Celebrated Drying Japan. Office and Paint Store at Nos. 152 and 154 North Fourth street, Philadelphia.

Christian Kunzig, 507 Vincent street, Philadelphia, continues his advertisement of the Patent Concealed Hinge. This complete little piece of mechanism should be carefully examined by builders, as it is said to possess decided advantages over other hinges. Plating, door locks that will not rust, shaft, pole and swingle tree tips are furnished to order.

Spring Perch Co., John street, Bridgeport, Conn., manufacturers of first quality warranted Springs and Axles.

Tomlinson Spring and Axle Co., Bridgeport, Conn., with a branch manufactory at Newark, N. J., opposite Chestnut Street Depot. These two well-known firms have each established an enviable reputation.

Wooodburn, Smith & Co., N. E. corner of Green and Second streets, St. Louis. Mo., manufacture Sarvin's Patent Wheel, Buggy and Carriage Wheels, Hubs, Spokes, Felloes, Handles, and Wagon and Carriage Materials, and are fully prepared to fill orders in their line.

J. G. Rouse & Co., corner of Arch and Fourth streets, Phila., importers and dealers in Coach Hardware and Trimmings, keep first-class goods only. They are sole agents for Mowry's Steel Axles and Springs. We have no doubt but they will make many new customers during 1870.

Wm. Burwell, No. 236 Arch street, Phila., whose name has become familiar among carriage-makers, through the Journal, as a manufacturer of Carriage Mountings, &c., is daily increasing his facilities for supplying the trade in all those nice little articles so essential to the perfect finish of a carriage. Read his advertisement carefully.

W. & H. Rowland, No. 948 Beach street, Philadelphia, manufacturers of Oil Tempered Cast Steel and Swedish Steel Springs, &c., &c., who are already familiar to our readers, are preparing to supply the heaviest demands that may be made on them. Those who have used their goods call them first class. Dealers particularly should be interested in their articles.

Nixon & Wigley, 39 North Seventh street, Philadelphia, manufacturers of Coach Lamps, continue their names before the trade, soliciting a share of patronage.

Rahway Wood Works, Rahway, N. J.—Spokes, Rims, Shafts, Poles, &c., made from the New Jersey hickory and white oak. Spokes on hand of seasoned timber, turned to any required pattern, and finished at short notice. Read their advertisement, and send for price list.

Samuel Jackson, No. 149 High street, Newark, N. J., continues to press his claims in favor of the "Patent Oscillating Wagon," which was patented April 6th, 1869. The advantages are, lighter draught, easier starting, less noisy, easier for riders, horses, vehicles, pavements or roads. This novelty deserves to be carefully inspected by progressive carriage-makers.

J. R. Denman, 71, 73 and 75 Barbara street, Newark, N. J., makes Carriage Glass a specialty, both plain and beveled plate. He refers to J. B. Brewster, New York City, and William D. Rogers, Philadelphia—names which are connected with the most perfectly finished work in America. Any peculiar delicacy or perfection of finish that is required to make a coach more luxurious, these firms obtain.

I. M. Inman, Box 188, Jersey City, N. J., through our advertising columns, calls attention to superior Transfer Ornaments, suitable for carriage and sleigh makers. This class of ornaments are too well known to need any description. Send on to Mr. Inman for a choice selection.

BE HONEST.

In our intercourse with men in every-day life, we discover as great a variety of dispositions as there are forms and expressions in the face, or proportions in the figure. Should we take a position on a crowded thoroughfare, and, for a few moments only, note the different expressions of human eyes, as their possessors glance them toward us, various characters would speak through them. Influenced by the color, size, shape of the brow, and, in no slight degree, by the inner man, they would represent sunshine, shadow, honesty, dishonesty, love, hatred and other traits.

The gait peculiar to each would also assist in defining their dispositions. Man is endowed with a keen sense in judging of character, when brought in contact with strangers, if he would but rightly use it, and to no feature is there a more tell-tale expression than in the eye. Insurance men, in their instructions to their agents, have laid it down, as a rule, that they be governed, in a great measure, by first impressions, and if this plan was more fully carried out, a great deal of trouble would be saved.

But we are deceived time and again, in our estimates formed of individuals, and are almost daily shocked by the reports of men who had gained the confidence of friends, and then basely betrayed it. Politicians who were trusted with responsible positions, business men of high standing, the fellow shop-mate, and even the minister of the Gospel, is not free from the charge of practicing deceit, and betraying confidence reposed in him. The complaint comes up against the servant who is entrusted with many little valuables about the house, and we hear it not unfrequently said by the mistress, "oh! that I could obtain an honest person to take charge of my household affairs."

Should a public servant, while in office, fail to enrich himself by plundering the government, when an opportunity offered, and retire a poor man, he is looked upon as a wonderful combination in human form, an honest man. When we remember that the majority of civilized people are early taught to love truth and honesty, and scorn to take a bribe, it is puzzling to understand why there should be so many underhanded means practiced to deceive, from the hidden falsehood, covered with sleek words, and quiet, easy manners, graded on up to the plain out lie. We can find no satisfactory solution, except it be the desire to make money rapidly. The poor, the rich, the religious and irreligious, each to a less or greater extent, preach money to their children.

The poor advise their little ones to strive after position and wealth; the rich desire that their children shall not be compelled to take a more humble position than that in which they were reared. Examples of extravagance are set on every hand, until the minds of the people have become dazzled and crazed. Men begin business, often establish a good character, and a heavy and profitable run of trade, and intend, in many instances, to be honest under all circumstances; but when a season of depression comes, they are led, step by step, into a disreputable course, in order to bolster up their extravagant mode of living, or a false pride as to the position they occupy in society, and to hide, from their friends and the community, their true condition. Finally, they have collected enough dishonesty, little by little, to form in their own minds a degraded opinion of themselves, and as there may be no honorable escape from their position, except through humiliating confessions, they are fully prepared to strike out boldly, gather together what they can, and be off, leaving creditors and tried and true friends amazed at the announcement.

There are a great many little scenes transpiring daily, which never come to the surface, which, although comparatively trifling, yet contain the same principle, and were the parties placed in a position where more important trusts were in their keeping, they would, in all probability, extend their operations as widely as the field of labor would allow. There are acts committed in every-day life which cannot be called dishonest, and yet are very annoying, leading to misunderstandings and coldness between former friends. In our own case, if we entrust an individual with that which is our own, and he fails to keep his promises, from time to time, to pay, we cannot but feel some misgivings.

Being so far from perfection ourself, and knowing that there are often trying circumstances surrounding a man which hedge him in for a time, we try to be very lenient and slow to assert our own claims, where they would inconvenience a friend; but after repeated promises have been broken, and we find that our favors have been used only to entangle us still deeper, we cannot be charged with being a hard master, should we use severe measures.

How much better it would be were all honest, for being continually dependent on each other, the suspicions that are now forced on us would be entirely removed, and we could trust each other in the performance of mutual obligations, and in case misfortune did prevent the fulfillment of a promise, we could then bear it with a good grace. Even in the small matter of a subscription to a work of this kind, the publisher is sometimes influenced by fair promises to give a short time before payment, and in how many instances is the payment entirely overlooked, and, in too many cases, *intentionally*, knowing the amount is so small that the matter will not be pushed. All such gains do not profit in the end. Our observation confirm us in the opinion that "honesty is the best policy," and any young man setting out in life would do well to remember that, by commencing right, he will stand a far better chance of success than by attempting to defraud the publisher, tailor, landlord, &c.

It would be so pleasant to move along through life, free from all vexations arising from dishonesty or the thoughtlessness of pretended friends; but as we cannot have everything exactly to our liking, and must be, in a measure, a hindrance to others in their attempts to find a smooth road on which to travel, we must submit to many things, unpleasant and unjust.

GLEANINGS.

In carrying out our design under the caption "Art of Coach Painting," we shall endeavor to touch upon everything of importance in its appropriate place. Questions from patrons who anticipate our instruction will nevertheless be answered cheerfully. * * Mr. E. P. Sargent, of Amesbury, Mass., who honored us with a visit a few weeks ago, stated that the sleigh trade had been very lively in that section. At Boston, Westboro', and places of lesser note, the supply was not equal to the demand. * * The seasons are out of joint. At and in the vicinity of Philadelphia we have had no sleighing worthy the name. No ice of a thickness suitable to be housed—no skating. The tide in the Delaware brings down sufficient ice to remind us that it is winter, otherwise we have little or no evidence of the fact. * * The shoemakers in Nantick, (Mass.) propose to establish a co-operative manufactory, with a capital of $20,000, in shares of ten dollars each. * * Diamond cutting at Amsterdam, (Holland,) gives employment to ten thousand persons. * * A Family of Carriage-Makers.—Mr. W. R. Crozier, of Piqua, Ohio, having recently renewed his subscription to the Journal, and also that of his two sons, one doing business at Sidney, and the other at Troy, Ohio, he remarked in his letter that they were a family of carriage-makers. He has three sons, one of them in partnership with himself. His only daughter was soon to be married to a carriage-maker, thus making the chain complete. Mr. W. R. Crozier has been in the business thirty-five years. During that time he has taken first premiums at the County, State and National Fairs, in all twenty-four premiums. May success attend all the Croziers, not omitting the lady who lately parted with the name. * * In sending out expiration notices, we occasionally, by mistake, mail one to a subscriber whose time has not expired. A sharp letter, asking an explanation, is the result. It *will* happen occasionally, in spite of our watchfulness. * * The Journal will not be furnished at a less price than that stated in our prospectus. Those who were in a club, and desire the Journal at the club rate, for a single subscription, cannot be accommodated. * * A letter lately received from La Chute, (Quebec,) says: "We are much pleased with the Journal, and trust your efforts will be amply requited. We glean a great deal of valuable information from its pages, especially from the pen of Brother P. Alette. All of the departments are ably conducted. Long may the Journal flourish, scattering broadcast knowledge that *cannot be obtained elsewhere.*" * * From Sheboygan Falls, Wis., we learn that the "Saco" sleigh, (given in No. 11, Vol. 4,) is considered very pretty; quite a number have been built. "I have some of the 'Saco' sleighs on hand, which are beauties. Continue the Journal to me." * * 550,000 pounds of copal and anime were imported into England in 1835. * * It is well known among carriage-makers in America, that varnish is cooling to a burn or cut. They have but recently made this discovery in Paris. The secret of the matter is, varnish excludes the air, the action of which causes pain. Nature then sets to work immediately to form a new cuticle. * * The "*Hub*," for January, was given on a double sheet. It contained much valuable matter. It was P. W. F.—Pretty-Well-Filled, Peculiarly-Well-Favored, and Presented-With-Force. * * G. Woeber & Brother, at Davenport, Iowa, are doing a thriving business. They sent in a club for the Journal, and say: "We look on the Journal as being one of the necessary things for every carriage-maker to have." * * Mr. H. Shafer, at Asbury, N. J., has sold out his stock to Carling & Plotts, who will continue the business. * * From Three Rivers, Mich., Messrs. Brigham & Warren report: "Times are tight, money scarce." This, however, did not deter them from forwarding the names and amount required to pay the subscription of a large club.

Send to Griswold & Co. for Bessemer steel.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "FRENCH OR SQUARE RULE" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Vol IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted.

Fashion Plates Explained.

BEAUFORT GENT'S PHÆTON.

PLATE No. 18.—This original design will strike the beholder at once as a vehicle possessing great beauty. The raking, beveled lines form a pleasing contrast to the swept and rounded lines of the seats. The hind seat may be reversed by closing up what in this plate forms the toe-board; the seat, when reversed, to be supported behind by a scroll brace attached to the bottom of body and seat. The blind work may be painted in imitation, cut solid in the panel, or left open, as fancy or the requirements of the customer may dictate.

DIMENSIONS.—Width of seat: 33 inches. Hubs: 4⅜ by 7 inches. Front band: 3⅛; back band: 3⅝. Spokes: 1 1-16. Tire: 1 by ¼, steel. Axles: 1¼ inch. Wheels: 3 feet 6 inches and 4 feet. Track: 5 feet. Springs: 37 inches long, 1½ inches wide, 4 plates.

PAINTING.—Body: black. Ground work: clear Prussian blue, over which black japan is to be laid, adding one-third rubbing varnish in the second coat, and one-half, or a trifle more, in the third coat, and finished with clear varnish. The blind work, if painted, to be outlined with fine line of New York red, (half and half carmine and vermilion,) and broad lines of olive of a width to represent the slat work.

Carriage-part: carmine, glazed on Indian red, striped broad line black, split with ⅛ line of gold.

TRIMMING.—Pearl-colored Turkey morocco, with black patent leather welt.

Mounting: gold. Lamps: column pattern.

PHŒNIX PHÆTON.

PLATE No. 19.—This draft was kindly furnished by Mr. B. U. Lyon, of the Phœnix Carriage Factory, which is located at Stamford, Conn., and is an evidence of the skill displayed in producing first-class work at a point removed from the large Eastern cities. It should have appeared in a former number, but was crowded out by circumstances beyond our control. It is a handsome phæton, and one that reflects credit on the Phœnix Works.

DIMENSIONS.—Width of seats to take 48 inch bows, square corners, with 3-16 half diamond moulding on top edge and front of seat. Body paneled with short bottom sides, doors shutting against the rocker; body having 2 inches turnunder, with deep chamfered mouldings. Boot: 28 inches wide, with rounded neck panel; the dickey seat to be supported by a light scroll iron, which is intentionally omitted. For hanging and staying the front seat lid, see explanation of Four-in-Hand Drag, Plate No. 11, No. 3, of this volume. Hubs: 4¾ by 7½. Front band: 3½; back band: 4⅛. Spokes: 1¼. Tire: 1⅛ by ¼, steel. Axles: 1⅜. Wheels: 3 feet 8 inches, and 4 feet 2 inches. Track: 5 feet. Springs: 1¾, 5 plates.

TRIMMING. — Inside lining: gray cloth. Dickey seat: leather.

PAINTING.—Body, panels and seats: wine color. Belt: Bismarck. Carriage-part: Bismarck, striped broad line of lake, edged with ⅛ line black, centered with gold.

Mounting: gold.

BRADLEY BUGGY.

PLATE No. 20.—A very light top buggy, being brought out with clean lines and surfaces, which are ever admired. The body has a swelled-back panel, the corners square. The under-side panel is beveled about ¾ of an inch, and hollowed at the back, where it falls into the under-back panel, which is hollowed out throughout its length. The projecting seat, duster and bracket front, contribute to make this a very pretty body.

DIMENSIONS.—Width of seat to take 42 inch bows. Hubs: 6 by 3½ inches. Front band: 2⅜; back band: 2⅞. Spokes: ⅞. Tire: ¾ by ⅛. Axles: ⅞. Wheels: 3 feet 11 inches, and 4 feet 1 inch.

TRIMMING.—Blue (indigo dyed) cloth.

PAINTING.—Body: black. The outline traced with a fine line of gold ochre. Carriage-part: purple, striped with fine line of gold ochre. Stays, clips, bolt-heads, &c.: black.

Mounting: gold.

MT. CARMEL FAMILY WAGON.

PLATE No. 21.—The plate here given will doubtless meet the wants of a large number of our patrons, while it may find a readier sale in the interior towns, or those sections where a finer class of work is not in demand. It might be put to profitable use in our large cities. In sections of Indiana, we know this wagon to be very popular.

DIMENSIONS.—Body: 87 inches long, 40 inches wide, and 10 inches deep. Height of top: 48 inches from top of body. Cleft in side may be sunk the depth of panel, or deeper, if required, for short turning. Hubs: 4¾ by 7½. Front band: 3¼; back band: 3⅞. Spokes: 1¼. Tire: 1⅛ by 5-16. Axles: 1¼ Wheels: 3 feet 6 inches, and 4 feet 2 inches. Springs: 1¾, 5 plates.

TRIMMING.—Seats and curtains: leather or duck.

PAINTING.—Body: black. Seats and carriage-part: olive, striped black and gold; cut under same as carriage-part.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.*

* * *

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER VIII.

"What though the spicy breezes blow soft o'er Ceylon's Isle,
And every prospect pleases, and only man is vile."

We had very pleasant weather after getting into the Mozambique Channel, which separates Madagascar from Africa, but we had a taste of what is called a "reglar Mozambiquer" before we got through; this is a very severe hard-blowing wind, which gathers force as it goes along, because, beginning in the Northern Indian Ocean, it gets compressed in between the coasts of Africa and Madagascar, and I tell you it does blow; I thought it was worse than the Cape Town winds, which blew us to sea. But our good ship weathered it, and we safely rounded the northern point of the great island, and turned south-east toward Tomatave, where we arrived safely without any incident worth mentioning.

The harbor of Tomatave is a mere indentation of the coast, but is protected from the swell of the sea by a long coral reef. The town is built on a long low sand spit, about 400 yards wide. The town is but a poor place, built among the sand hills, a few cocoa trees relieving its general aspect of barrenness, but the place is the seaport capital of the island, and has quite a brisk trade with the island of Mauritius, and also the island of Bourbon; both these places are entirely dependent on Madagascar for beef, as they have no cattle of their own. After coming to anchor, we were boarded by the native Harbor Master, who made his bow, dressed in shirt and the native lamba, a scarf worn across the shoulders, and he had nothing else on. He was a very fine looking fellow, with none of the negro about him, and with unexceptionable good manners. He appeared to be very glad at our arrival, for

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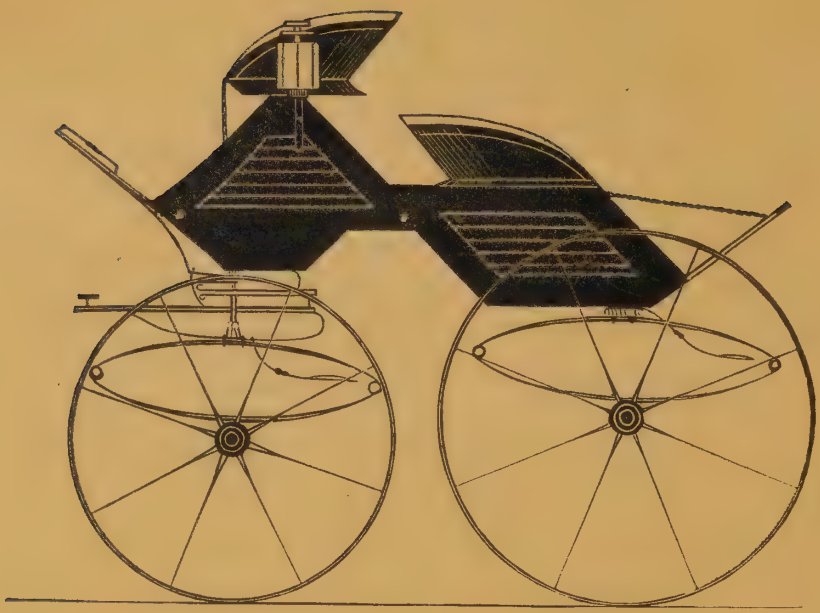
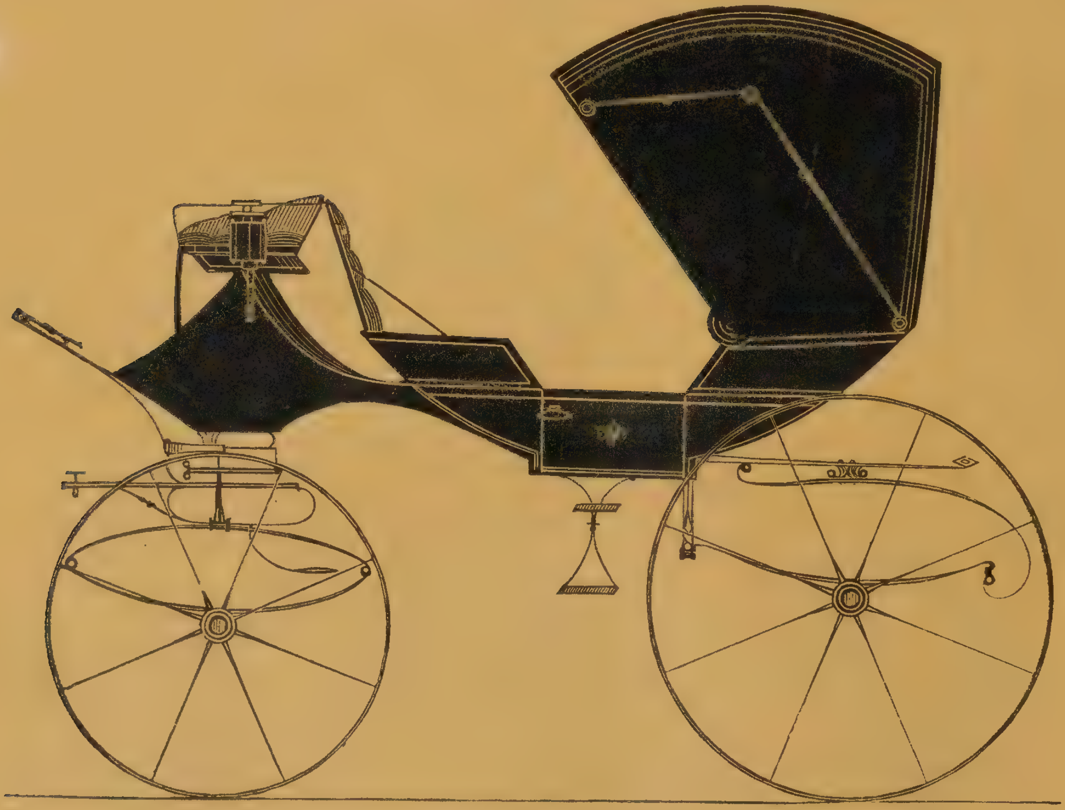


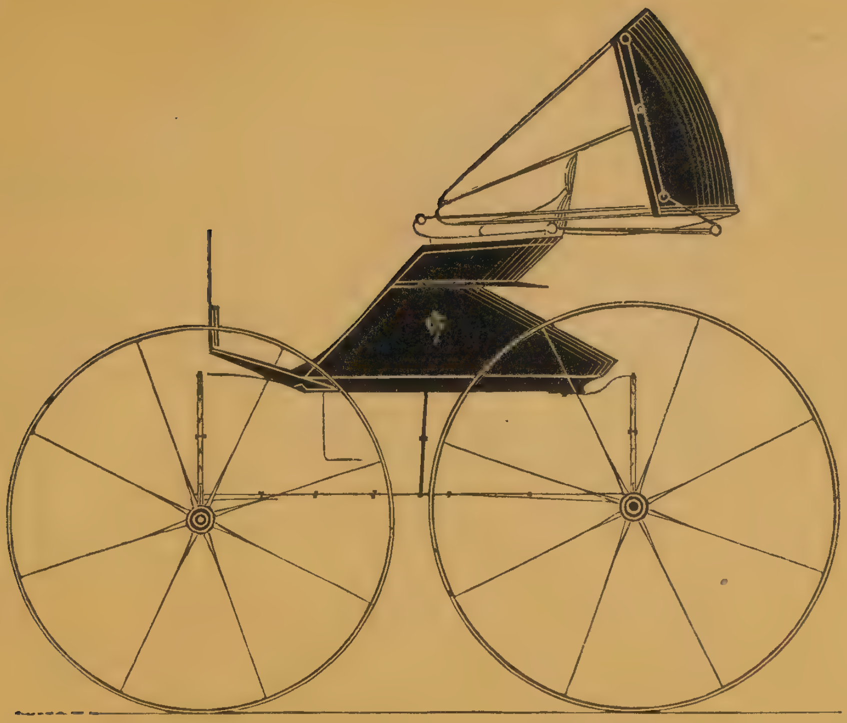
BEAUFORT PHÆTON.

Plate No. 18.—Half-inch Scale.—Explanation on Page 68.



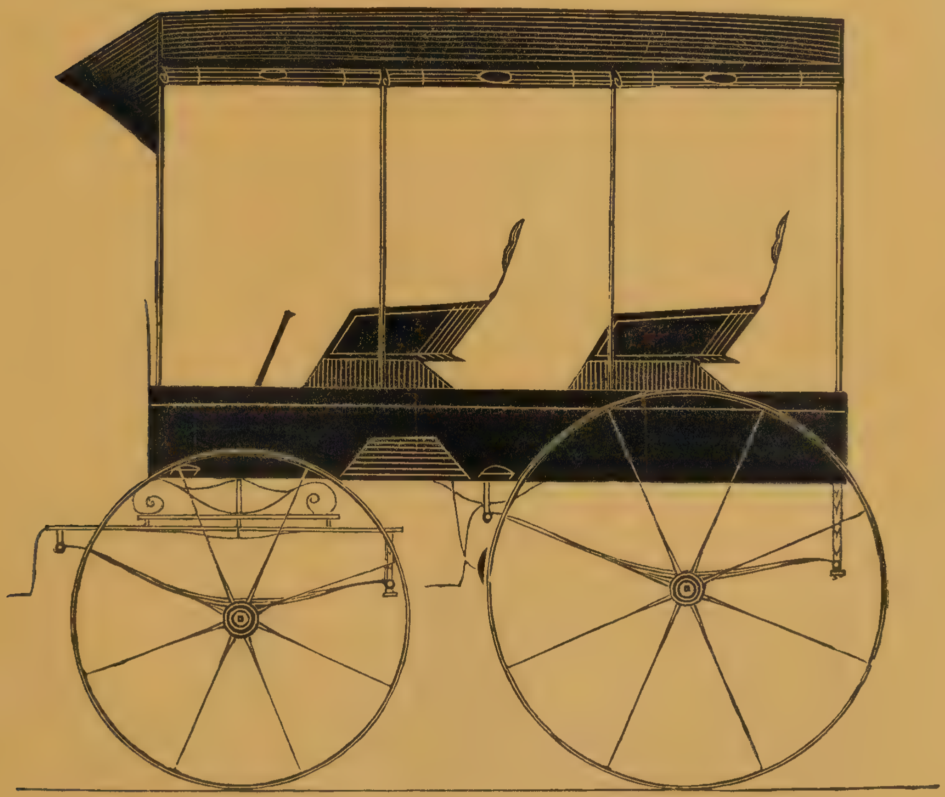
PHŒNIX PHÆTON.

Plate No. 19.—Half-inch Scale.—Explanation on Page 68.



BRADLEY BUGGY.

Plate No. 20.—Half-inch Scale.—Explanation on Page 68.



MT. CARMEL FAMILY WAGON.

Plate No. 21.—Half-inch Scale.—Explanation on Page 68.

the Americans are the favored nation here; so much so that when the English and French missionaries, teachers and traders were driven from the country, the Americans were still allowed to trade here.

Madagascar is an immense island; its extent is as great as all of the British Isles. Its population is supposed to be about 3,000,000, and its people are the most patriotic and home-loving of any on the face of the earth, without any exception.

In 1817, Radama, who was king of the northern half of the island, the capital of which was "Tananarivo," made a treaty with the English Governor of Mauritius, Sir Robert Farquhar. The British sought the abolition of slavery, and agreed to pay King Radama a certain amount in arms, ammunition, &c., and also took a number of Malagasy youths on board the men-of-war so as to educate them for seamen, and that they might be able to act as pilots for their own coast. Missionaries arrived in 1818, one year after the treaty was signed, and in 1820 a number of skillful mechanics were sent by the English mission societies to the capital, "Tananarivo," for the purpose of teaching the natives some of the useful trades. In the next ten years over 15,000 Malagasys could read and write, and with the arms and drilled soldiers of King Radama, he extended his influence over nearly the whole island, but it was at a fearful waste of life, for the natives of this magnificent country are as brave as they are patriotic, and did not hesitate to meet King Radama's followers wherever they could; but the murderous inventions of civilized warfare proved too much for even savage bravery, and the poor followers of the native chiefs were actually slaughtered by tens of thousands, and the king's sway was acknowledged over nearly the whole at the time of his death, which took place in 1828, when he was only thirty-six years of age.

There is no doubt but what Radama was far in advance of his age, and clearly saw the great advantages that would arise to his country by closer political assimilation to the institutions of modern civilization and the abolition of slavery. Had he lived to carry out his progressive ideas, his country might have been in a different situation to what we find it to-day; but dying so soon left his plans unfinished, with no competent head to carry them out. The consequences were fearful, and all the blood shed to advance his ideas of Christianity and civilization was wasted and shed in vain. The chapter of horrors began by the assassination of Prince Rakatobe, in 1835, (he was Radama's successor,) then the Christian religion was prohibited, and all the books in the country ordered to be given up to the government under pain of death. In 1836 the missionaries and mechanics had to leave, and the Malagasy laws were applied to foreigners, such as traders, &c. Most of these resided in Tomatave, and at the capital, which is situated 180 miles inland from Tomatave. Things finally got so bad that the government persecuted all who professed the Christian religion, and over 14,000 Christians were slaughtered, either by the soldiery or by being compelled to drink the fearful poison of the country, the deadly "Tangena water." At last the traders were so persecuted that they applied to the English Governor of Mauritius, and to the French Governor of the Isle of Bourbon, for assistance. One British and two French men-of-war appeared at Tomatave and demanded redress. This was insolently refused, so men were landed and the town burnt, but the British and French were driven off with the loss of twelve men killed, whose heads were cut off and mounted on poles over the fort, and where they remained for years after to show what mercy the Malagasys would give to invaders.

After this all trade was stopped, which made things bad for both the British and French populations of Mauritius and of Bourbon, because they depended entirely on Madagascar for their supply of beef, there being none on either of the islands; so they had to import meat from the Cape of Good Hope, or else from Singapore, on the southern coast of India, distant thousands of miles from them. They were, consequently, very anxious to re-arrange the question of trade, so in 1864 a Mr. Ellis, a missionary, was deputed by the merchants of Mauritius to proceed to Madagascar and attempt to see the queen, and induce her to allow the trade to be again opened. After three years' suspense it was finally granted, on condition of £700 sterling to be paid to the queen; they were then allowed to trade to the port of Tomatave, but all this time the Americans had the privilege of trading with the people, and they had several depots on the western and southern coasts, where they collected hides and horns in exchange for guns and ammunition, and calicoes and trinkets.

Our whalers, too, visited there in search for "ile," which was very plentiful in the vicinity of the lovely Seychelle Islands, situated off the north-east coast of Madagascar. Those delightful isles are the home of the far-famed "Cocoa-de-Mer," or cocoanuts of the sea, so called on account of their immense size, and the fact that it was years before the place they grew was discovered; they used to be found floating at sea, and sometimes were driven ashore in great numbers on the coast of Hindostan, but no one knew where they came from until the islands were discovered. They are, or were, mostly visited by American whale ships, and on one of them an American captain, named Hunter, settled and had a beautiful spice plantation. I would be almost tempted to spend the rest of my days there, for they are so peculiarly situated, geographically, that the very "oldest inhabitant" *never remembers seeing a storm.* They are, in fact, perfect elysiums, the region of perpetual summer, and of calm delightful climate. Even the natives are mild and happy, and in these warm placid summer seas the mighty whale used to crowd in hundreds to bring forth their young in quiet, until the spirit of gain discovered their retreat, and so many were slaughtered that they are now rather scarce, and it does not pay to hunt them.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

COLOR.

BY J. H. T.

COLORING IN PAINTING.

Continued from page 54.

2. But in the second part of coloring, or the economy and disposing thereof in paintings, regard is had either first, to the quality of the colors, to appropriate them according to their value and agreement; or, secondly, to their effect in the union and economy of the work.

As to the first, it must be observed that white represents light, and gives a briskness and heightening; on the contrary, black, like darkness, obscures and effaces the objects. Again, black sets off the light parts, and by that they serve each other to loosen the objects.

You must be careful in choosing colors; too much charged matter must be avoided, both in carnations, where red colors are not to be affected, as rather resembling the flesh when flayed than the skin, and all bright, glowing colors; the skin, how delicate soever, being of a down color.

In the drapery, where the painter has his whole flock of colors to choose out of to procure a good effect, and in the landscape to dispose of those colors near one another, which mutually assist and raise each other's force and briskness, as red and green, yellow and blue.

To manage them so, as that they be accommodated to the effects of the great parts of light and color, that the strong colors lead to the soft ones, and make them more looked at, bringing them forward, or keeping them back, according to the situation and degree of force required.

As to the effects of colors, they either have relation to the union or the economy. With respect to the first, care must be taken that they be laid so as to be sweetly united under the briskness of some principal one; that they participate of the prevailing light of the piece, and that they partake of each other by the communication of light and help of reflection.

As for the economy in managing their degrees, regard is to be had to the contrast or opposition intervening in the union of the colors; that by a sweet interruption the briskness, which otherwise fades and palls, may be raised to the harmony which makes the variety of colors agree; supplying and sustaining the weakness of some by the strength of others; neglecting some places to serve as a basis or repose to the sight, and to enhance those which are to prevail through the piece.

As to the degradation, where, the better to proportion the colors that fall behind, some of the same kind are to be preserved in their purity, as a standard for those carried afar off to be compared by, in order to justify the diminution; regard being always had to the quality of the air, which, when loaded with vapors, weakens the colors more than when clear.

As to the situation of the colors, in this, care must be taken that the purest and the strongest be placed in front of the piece; and that the compound ones, which are to appear at a distance, be kept back. Glazed colors should always be used in the front rank.

As to the expression of the subject, and the nature of the matters, whether shining or dull, opaque or transparent, polished or rough.

Colors are to the eye what sounds are to the ear, or any other objects of our senses are to these senses; and, accordingly, an eye that is delicate takes in proportionable pleasure from beautiful ones, and is much offended with the contrary.

Good coloring in a picture is of consequence, and must be varied according to the subject, the time and place. If the subject be grave, melancholy or terrible, the general tint of the coloring must incline to brown, black, and sometimes red and gloomy; but you must be gay and pleasant in subjects of joy and triumph.

Morning, noon, evening, night, sunshine, wet or cloudy weather, influences the color of things; and if the scene of the picture be a room, open air, partly open and partly closed, the coloring must be accordingly.

The distance also alters the coloring, because of the medium of air through which everything is seen, which being blue, the more remote any object is, the more it must partake of that color, and of consequence must have less force or strength; the ground, therefore, or whatever is behind a figure, for example, must not be so strong as that figure is, nor any of its parts which round off, as those that come nearer to the eye; and that not only for the reason already given, but because there will always be reflections, stronger or weaker, that will diminish the force of the shadows, which reflections, by the way, must partake of the colors of those things from whence they are produced.

A sky entirely blue would have less beauty than it has were it not always varied toward the horizon by the sunbeams, whether rising, setting or in its progress; but neither has it that beauty as when more varied with clouds, tinged with yellow, white, purple, &c.

A piece of silk or cloth, hung or laid flat, has not the beauty, though the color of it be pleasing, as when flung into folds; nay, a piece of silk that has little beauty in itself, may be much improved by being pinked, watered or quilted. The reason is, in these cases, there arises a variety, produced by lights, shades and reflections.

There are certain colors less agreeable than others, as a brick wall, for example; yet when the sun strikes it upon one part, and the sky tinges another part of it, and the shadows and reflections the rest, this variety shall give even this a degree of beauty.

Perfect white and black are disagreeable, for which reason a painter should break those extremes of colors, that there may be a warmth and mellowness in his work. Let him, in flesh especially, remember to avoid the chalk, the brick and the charcoal, and think only of the rich pearl and ripe peach.

But it is not enough that the colors in themselves are beautiful singly, and that there is variety; they must be set by one another, so as to be mutually assistant to each other; and this not only in the object painted, but in the ground, and whatever comes into the composition, so that as every part, and the whole together, may have a pleasing effect to the eye; such a harmony to it as a good piece of music to the ear, but for which no certain rules can be given, no more than for the latter, except in some few general cases, which are very obvious, and need not therefore be mentioned here. The best that can be done is to observe nature, and how the best painters have imitated her. What a lightness, thinness and transparency; what a warmth, clearness and delicacy is to be seen in life and good pictures.

The Venetian, Lombard and Flemish schools have excelled in coloring; the Florentine and Roman in design; the Bolognese masters in both, but not to the degree generally as either of the other.

Correggio, Titian, Paolo Veronese, Rubens and Van Dyke were admirable colorists. The latter, in his best things, has followed nature extremely close.

Raphael's coloring, especially in his shadows, is blackish. This was occasioned by the use of a sort of printers' ink, or black, and which has changed its tint, though it was warm and glowing at first, upon which account he was fond of it, though he was advised what would be the consequence. However, by the vast progress he made in coloring, after he applied himself to it, it is judged he would, in this part of painting, also have excelled as in the others. Here would have been a double prodigy, since no one man has ever possessed even coloring and designing to that or any very considerable extent or degree. Though the cartoons are some of the last of his works, it must be considered that the coloring is not equal to the drawing; but, at the same time, neither can it be denied but that he that painted those could color well, and would have colored better. It must be considered they were made for patterns for tapestry, not professed pictures, and painted not in oil but in distemper. If, therefore, one sees not the warmth, and mellowness, and delicacy of coloring which is to be found in Correggio, Titian or Rubens, it may be, in a measure, fairly imputed to these causes.

A judicious painter has other considerations relating to the coloring, when he makes patterns for tapestry be heightened with gold and silver, than when he paints a picture without any such view, nor can a dryness and harshness be avoided in distemper upon paper. Besides, time has apparently changed some of the colors.

In a word, the *tout ensemble* of the colors is agreeable and noble, and the parts of it are in general extremely, though not superlatively good.

These articles on color and coloring have exceeded the length I intended they should when I first commenced them; but if they have imparted any instruction to the numerous readers of the JOURNAL, I am amply repaid for my trouble, and shall, at some future time, endeavor to give them something more instructive.

For the Coach-Makers' International Journal.

Why So Many Incompetent Workmen?

The best answer that can be made to the above question is, that it does not pay to spend the time and brain labor that is necessary in order to become a good workman. If this statement is not true to the letter, it comes so near to it that it is not worth while to question it. There has been a great deal written and said about capital and labor without arriving at any satisfactory result, until I think the subject better be changed, and ask: if we shall have any good workmen at all in our carriage shops? The action of Messrs. Brewster & Co. would seem like a long stride in the right direction, but their system is hardly practicable in smaller shops.

Facts are stubborn things, but let us look at them as they are known to exist. The shops through the country, in Northern New York at all events, that turn out from twenty-five to two or three hundred carriages a year, employ about two hands (that if left in the shop alone could not make a respectable wheelbarrow) to one competent workman, all at about the same wages, the odds sometimes being in favor of the botch, because by being watched and told a little, he can make a lumber wagon gear as quick as any man in the shop—no matter if, on finishing up his work, you do find botched places that escaped the notice of the foreman, that it costs something to make right. The foreman usually has to stand the blame, although the botches, in some instances, receive the same wages as the foreman, who is expected, besides seeing that every job that is turned out is well done, to do a good day's work himself. In by far too many shops the good workman is entirely wanting, hence the numerous unsightly vehicles that meet the traveler at every turn, and carriages that rattle to pieces before they have been used scarcely enough to soil a good one, and which, owing to the ignorance of the purchaser, is sold for about the same amount that it would take to purchase a good one.

This is no exaggerated statement, it is the general condition of affairs in the rural districts. It has been stated that jours were getting so that they would not show an apprentice or associate with him. I cannot answer for every journeyman, but in general I think the statement is wide of the truth. The shop in which I am employed would be glad to get a good apprentice, but the fool that would enlist would not have brains enough to make a workman that would amount to much. I am acquainted with most of the shops in our County, and in all the shops that I know there is not an apprentice. If a young man thinks it a little easier and more agreeable to be a mechanic than to work on a farm, all he has to do, if he is ingenious, is to hire out with a squad of carpenters, putting up barns and doing coarse work through the summer; and then having got the use of tools a little, he is all right for a job in the shop in the fall, and gets nearly the same wages as a good workman all the time.

I have heard many wise (?) persons state that such and such persons were excellent mechanics, and never served a day's apprenticeship in their lives. If that be true, it is a great pity that they did not put themselves in a way to have gained the advantage of the experience of their predecessors, thus putting themselves far ahead of their fellow-craftsmen. Then again, that would do no good, as they would receive only about the same wages as the botch.

Friend Veatch, in one of his articles, stated that, in canvassing for the JOURNAL, he sometimes came across those that pleaded their inability to pay for the JOURNAL. No doubt, truly too, I think, it would be fair to say that the trade that will not support the competent workman and family in good shape, and enable him to buy all the reading matter he needs, and lay up something besides, is not worth taking much trouble to learn, and that is the reason of so many of the best workmen becoming disgusted with it, throwing it up, and going West and on to farms, &c.

When I went to learn my trade, a good workman received enough for one day's work to hire a man to work in his garden three days. Now, he will have to pay a man to work in his garden or saw his wood, nearly the same number of cents that he receives himself for a day's work. Under these circumstances, what man is going to apprentice his son to a wheelwright, or what young man apprentice himself?

It has been said that "money is the root of all evil." It is just as true that it is the root of all good. If talent will not bring anything in a carriage shop, it will naturally look for some other market, and mechanical art sicken under the hands of impoverished workmen. It is, of course, the scarcity of help that enables the incompetent man to get work in a shop and obtain the wages he does. But what is to be done for the competent workman? The bosses claim that they are paying all that they can afford to. In this, I think, they are mistaken. Let them employ none but competent hands, unless they receive them as apprentices, and at apprentices' wages, and pay their journeymen according to their ability, making it some object to try to excel besides simply being called the best workmen, which would starve any man. Then will he have the heart and courage to make an effort to improve himself in his business, and not until then. Then let the boss hold his work at prices that will leave him a good profit, and he will find men enough to buy all the work he can make, that will know the difference between the work made by workmen and that made by botches. When a few shops of this kind are established, good workmen will come out from among bushwhackers, and work for men that will pay them what they are worth, leaving the slopshop work still poorer than it now is, and making the contrast between that and good work still more apparent to the customer, and soon there will be enough that will want to learn the trade. Newspapers could not spend their ink in a better way than by using a part of it to instruct their readers as to the relative value of work made by men who have learned their trade and that made by bushwhackers, as well as exposing other swindles.

A mechanic, with his tools, ought to be worth as much per day as a horse, whereas now he has to work three days to pay for a horse and carriage two days. If the mechanic ever receives inflated wages, it will be on account of a reaction of the present state of affairs. As the wages of a man in the customer's eyes is a sure index to his ability, he supposes that the man that pays the highest wages has the best work, and bosses will find it just as easy to pay their workmen good wages as to half pay them. VICTIM.

P. S.—Spoke Shave has at least learned me one thing, *i. e.*, that to steam a hub well, means to do it up in a wet rag two minutes. This looks like a small hole for a full-sized man to crawl into, and I believe I would not have poked my head out to throw any slur about having been there. If he did not mean to steam them well, only do them up in a wet rag, why did he not say that his words did not express what he meant? If he did mean it, and has changed his mind, it would have looked better to have acknowledged it; but we will leave him in his hole and in the hands of his readers, who are his judges, and perhaps he will take a dry rag next. V.

PENCIL RULE & SQUARE

D. BOARD EDITOR

SCALE DRAFTING.

Continued from page 23.—Scale ½ inch.

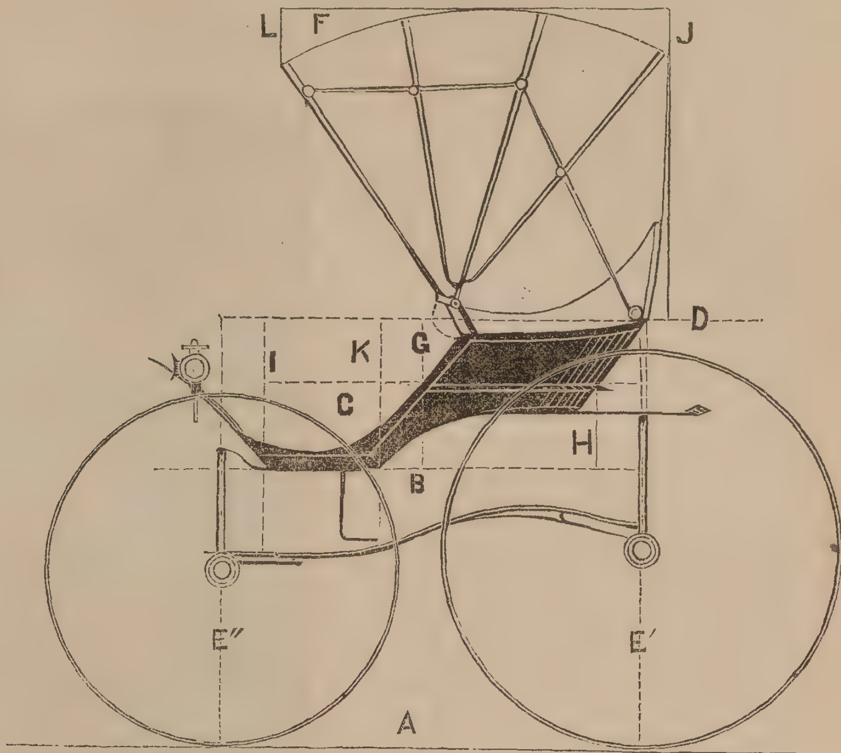
It will be remembered that in No. 3, of this volume, we stated that the "Scale Drafting" would be laid over to give place to the manner of constructing the Four-in-Hand Drag, and that it would reappear in future numbers.

The space required for giving the working draft for the Elm City Landau, also necessitated the further postponement until the present number.

In the October number we selected the Monitor pattern, because it was easier of explanation, and to the new beginner would not present anything likely to discourage him in his first attempts at scale drafting. The November number completed the outlines, and gave instruction as to the inking in.

The accompanying diagram, "The Prescott Phæton," is a drop-front, close-top buggy, which, by its varying lines, requires the use of "sweep" patterns, which are represented and explained in this connection.

Commence by drawing base line *A*. Measure 35 inches from base line *A*, and produce dotted line *B*, being the full depth of the drop-front. From this line measure 11½ inches, and draw dotted line *C*, which represents the height of seat-frame. From line *C* measure 8 inches, and draw dotted line *D*, being full height of seat. Measure 45½ inches from dotted line *C*, and draw line *F*, showing the square of the full height of top.



Having established the full height of the buggy from the base line *A*, noting the different points as we ascended to line *F*, we will proceed and lay out for the length. Measure 51½ inches, and draw the vertical dotted lines *E′ E″*, which represent the centres of front and hind wheels, which are 3 feet 8 inches, and 4 feet 1 inch. Measure from base line *A* 24½ inches, being half the height of hind wheel; and also 22 inches from base line *A*, on line *E*, being half the height of front wheel. Now, with your dividers carrying the pencil point, strike the wheels and afterward the hubs. (It should be borne in mind that we are making a pencil sketch.)

We will now proceed, laying out for the height of pump-handle, the back bed arched 3 inches, 1½ inches deep; springs, 11 inches over all; spring bar, 1½ inches deep; making in all 17 inches from the centre of hind wheel to the bearing of pump-handle. At this point draw a horizontal line, which is the bottom of pump-handle.

Next, lay out for height of front spring bar. The front axle bed drops 1½ inches, and is 1½ inches deep. Fifth wheels, ½ inch each; spring block, 1½ inches; springs, 11 inches over all; depth of front spring bar, 1½ inches; making in all 15 inches from centre of wheel to the bottom of body-loop. Measure from vertical dotted line *E″* 4½ inches, and draw vertical line *I*. This establishes the front bottom corner of body. From line *I* measure 15 inches, and produce vertical dotted line *K*, which gives the front of the arch where it intersects base line *B*. From dotted line *I* measure 20 inches, and draw vertical dotted line *G*, which, at its intersection of horizontal line *C*, establishes a point which is the front of seat.

Measure from line *G* 21 inches, and draw *H*, which gives the depth of seat. This is intended for a spring back. With the rectangular protractor, lay off for the bevel of the seat and body, inclining them to whatever degrees fancy may dictate.

On dotted horizontal line *D*, from its point of intersection with dotted vertical line *E′*, measure off 3½ inches; and from this point erect the line *J*, and from line *J* produce line *L*, 47 inches distant, which gives the width of the top.

Having now completed the establishment of the main points, we will proceed to apply the sweep patterns. But before we explain their use, let us remark that in using irregular sweeps, it is the better plan to always use the round side of the pattern, as the pencil or pen follows it with more precision.

The carriage draftsman should make his own sweeps; his first care being to select suitable wood, as the eveness of the edge depends, in a great measure, on the closeness of the grain of the wood. Mahogany or rosewood are far inferior to pear or close-grained apple tree; the latter also being less liable to split. In finishing the sweep to suit the eye, use fine sandpaper, rounding the edge a trifle. Test the accuracy of the edge of the pattern on a separate piece of paper, and in no case apply it to the draft in hand until it is uniform throughout.

The first to be drawn is the "arch" sweep. To produce this, apply so much of the pattern

Fig. 1 as is contained between the *Nos.* 1 and 2, the back part coming in above the pump-handle, which leaves the pump-handle straight, giving the body a depth of 3 inches on a vertical line.

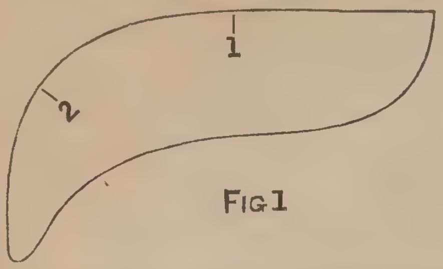


FIG 1

Fig. 2, between the *numbers* 1 and 2, was made use of in producing the sweep on the front of body, and at other points on the pattern, (not numbered;) the dash and top line of seat were traced.

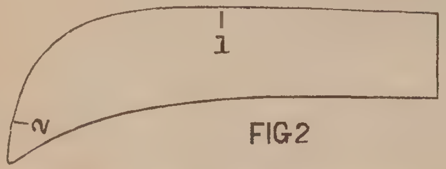


FIG 2

Fig. 3 is very useful for turning the sweep of slat irons.

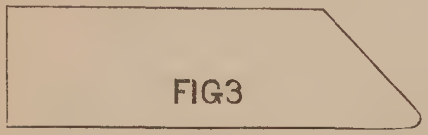


FIG 3

Fig. 4, the perch sweep; *line* 1, centre of hind spring; *line* 2, centre of front spring.

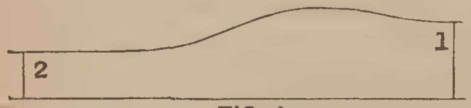


FIG 4

Fig. 5, the loop sweep for bodies, varying to suit the different classes of work. *Line* 1 is the sweep for front loop on the draft now under consideration.

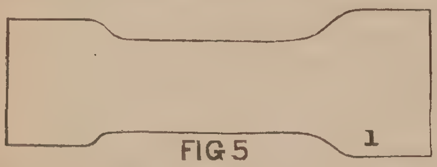


FIG 5

Top is 5½ inches round; front bow 1 inch lower than the back one, and struck to a circle of 8 feet 2 inches.

The seat has a high back. The side arm-piece to which the trimming is attached is represented by the swept line shown above the top of seat, which is not seen from the outside with a close top.

To complete the draft, it is necessary only to add the joints, lamp and step.

In the next number the draft will be completed.

CHICAGO BUCK-BOARD WAGON.

We are indebted to Mr. James Kealy, of Mr. H. McFarlane's shop, Chicago, Ill., for the draft and explanation of this novel buggy. It is growing in favor in that city, and orders are now being filled for parties in New York City. This plan of construction is a great improvement over the old-fashioned buck-board, which was ill-proportioned, though probably imparting easy motion to the rider.

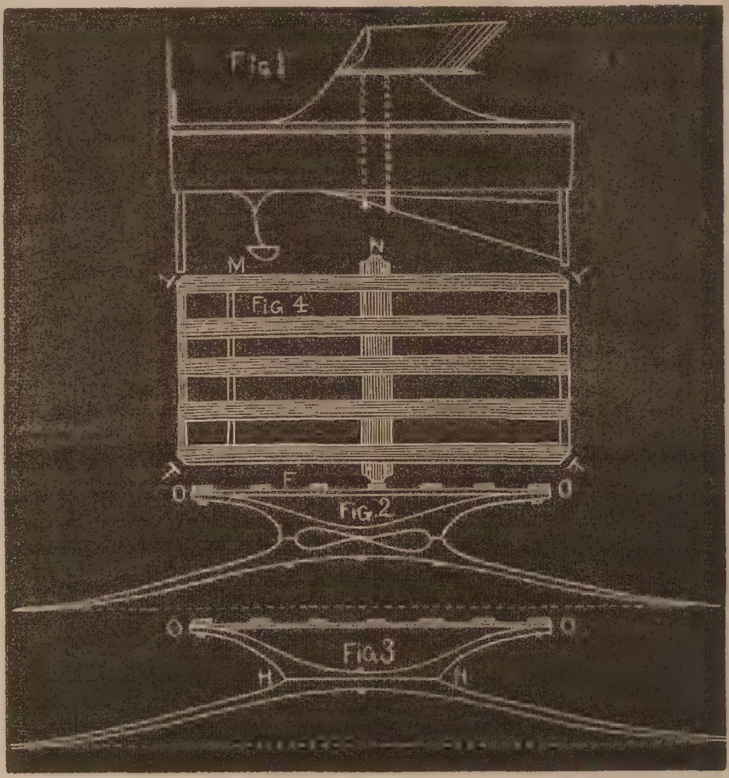


Fig. 1 represents the side elevation of body. and outside and centre stay for axle. The dotted lines indicate the position of strap bolts, which fasten the body to bottom bars. These strap bolts are secured to the pillars which support the seat. There is no sill. Body is clear of the bottom ⅜ all around, except at point *N.*

Fig. 2 shows back view of axle riser and slats when on. Depth of bed and riser, from straight lines, 8½ inches. Bar F, ⅞ by ¼.

Fig. 3.—Front axle, riser and bed. Depth, 8⅝.

Fig. 4.—Bottom or slats are seven in number, and half inch apart, the two outside ones 2⅞ wide and ⅝ thick, the remaining slats are 5 inches wide, ⅝ thick back of centre, and ½ in front of centre. Length of bottom, 49 inches; width, 23 inches; *N,* bar for body to bolt to; *M,* bar for step and king-bolt guard and two stays from *H H, Fig.* 3.

There are thin pieces of rubber inserted between riser *O* and bar *F,* the bolts passing through at slot *T,* and made fast to prevent rattling of body against the bottom. There should be a smooth plate of iron on the three-cornered block inside of body, for the rubber to work in.

Dimensions..—Wheels: 4 feet and 4 feet 2 inches. Hubs: 3½ by 6 inches. Spokes: 1 inch. Tire: ¾ by ⅛. Axles: ¾ steel.

Painting.—Body: black. Gearing: carmine, striped black and gold.

CORRECTION.

In the January number, an error occurs on page 56, at line second, in the description of the "Cant of the Elm City Landau," which reads "*Fig.* 3 is the device, &c." It should be *Fig.* 2.

For the Coach-Makers' International Journal.

Westfield, Pa., January 3d, 1870.

Mr. Editor:—Not that I would find any fault, but I sometimes wish the writers of the Journal would try at least to be a little plainer —write as though they were talking to a raw apprentice instead of a man that knew half or two-thirds of the subject in hand already.

The Journal is taken and read carefully by many a man that is doing a small business in an out-of-the-way town, whose means will not allow of his going to the city, once in a year or two, to study up the improvements in carriage building, but they depend on the Journal to keep them posted. Such men want things made plain, while for others a single hint would suffice.

In No. 2, O. L. wishes to know the best way of getting the bevel of the end of a seat corner. D. Board answers the question by telling him how to proceed when the back and seat ends flare the same; but as this does not always happen, I will tell him how I should get the bevel in case the back flares 2 inches in 3, and the arms or ends 1 inch in 2, or any other amount.

On any planed board gauge a base line 1, also gauge line 2 the perpendicular depth you wish your seat from line 1; then on *Fig.* 1 square line 3 from point 0, and from same point lay off line 4 the flare you want your ends; then with your dividers with radius *O A*, draw line 5 from the point where 5 crosses 3, draw parallel line 6. Now, from point 0 draw line 7, the flare of the back; and from where it crosses line 2, draw line 8 square with 1. Then from 0 to intersecting point of lines 6 and 8 will be the correct bevel to cut the ends of seat.

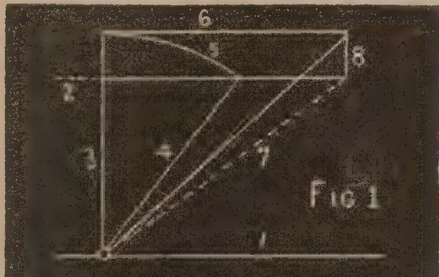


FIG 1

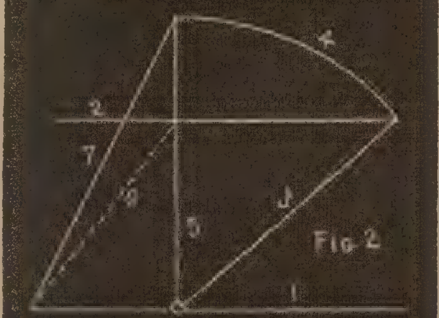


FIG 2

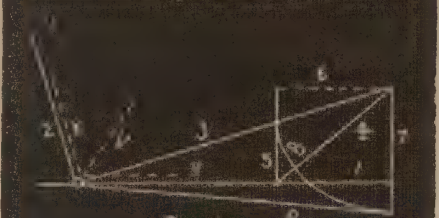


FIG 3

Draw lines 1 and 2 in *Fig.* 2, same as lines 1 and 2 in *Fig.* 1; then from point 0 draw line 3, the flare of the back. Then with dividers at point 0, and intersecting point of lines 2 and 3, draw line 4 from 0 square line 5. From intersecting point of lines 5 and 2, draw line 6, the flare of the seat ends. Then from intersecting point of lines 6 and 1, to intersecting point of lines 4 and 5, will be line 7, the bevel to cut the ends of the back.

Fig. 3 represents the manner of obtaining the correct bevel for dressing the pillars to a stick seat when the flare of the seat back and ends is unlike. Draw base line 1, then line 2, the flare you want your seat ends; then draw line 3 square with line 2 from point 0 any distance you wish. Now, any distance from point 0 on the base line draw line 4, the flare you want your back, Now, from same point on base line, draw 5 square with 1; and from intersecting point of lines 3 and 4, draw dotted line 6 parallel with 1; and from same point draw 7 square with 1. Now, with dividers at intersecting point of lines 3 and 4, and lines 5 and 6, draw curved line 8; then draw a line from 0 to intersecting point of lines 7 and 8, making line 9. Then will lines 2 and 9 be the correct bevel to dress the pillar to a stick seat, or corner block to a pieced panel seat. And if you wish to lay out your seat panels with square edges, draw dotted lines *U V X*, the thickness of your stuff, inside of lines 2 and 9; then a line from 0 to intersecting point of lines *U V X* will be the correct mitre.

I could explain why the above plan would produce the desired result, but I fear it would occupy too much space.

I am in hopes P. ALLET will give us a chapter on striping before he finishes his "Art of Coach Painting." For instance, if he would tell us back-country chaps what colors to stripe, and fine line gearings painted with the colors he tells how to mix on page 43, No. 3.

Yours, ALLUST.

HAMMER SLEDGE & ANVIL

V. ULCAN EDITOR

HOOPING WHEELS.

In my last communication, I gave you a lesson on wheels, with half-inch dish or more. I will now give you a few ideas on straight wheels. What we call straight wheels are those which, by laying a straight edge across the face of the wheel, having both the felloes and spokes touch the straight edge.

First, then we will examine them, and see what condition they are in for the tire, so that we can determine what draft to give them. See if the felloes are down snug on the shoulder of the spokes, and how much open there is in the rim. For instance, one set we will suppose to be 1½-inch felloe, open 3-16 inch, give good ¼-inch draft; 1⅜-inch felloe, 3-16 inch, open just ¼-inch draft; 1¼-inch felloe, 3-16 inch open, 3-16 inch draft; 1⅛ and 1-inch felloe, ⅛-inch open, ⅛-inch draft.

Now, in determining what draft to give the above wheels, we supposed them to be all good, sound, hard hickory felloes. If the felloes are rather soft timber, give just a mere trifle more draft. If the wheels should be above ¼-inch dish, the felloes would want only one-half of the opening, but give the same draft as the above, and if ½-inch dish, give the same draft I gave in Vol. V, No. 4. In running the tire, lay all the above tire in sets on the floor, roll the wheels on them, and allow 1 inch for taking up in bending; then mark the end of hub with chalk, 1, 2, 3, 4, &c., and the tire with a sharp cold chisel, mark thus, I, II, III, IV, and so on; then straighten on a block set up endwise, about 2 feet high, little concave or lowest in centre of block; letting the helper strike while the smith manages the tires, until the kinks are all taken out of them; bend one end a little, so it can be got in the machine, and take pains to get them round as possible.

In running the wheels with the "traveler," a wedge must be driven in one of the joints of the felloe, for the purpose of tightening the other joint or joints in the rim: then get the length of the felloe, and in running the tire, cut it ⅛ inch shorter than the rim measures. In this explanation we are supposed to have steel tire, and we have a kind of steel tire now that is very high and difficult to weld, and there are many smiths that will profit by this lesson, if they will use the same precaution I give. This tire steel will not stand as heavy heat as even cast-steel, and if it is overheated, in the least, it will crack or break in two while hot.

There is one peculiar fact connected with it we find in no other kind of steel, and that is this: It is apt to slip, however good the heat, and to obviate this, after scarfing the ends down to a sharp edge, make a rather short lap, and while hot, take a sharp-pointed punch, and punch a hole nearly through both laps, and drive in a sharp pin, made of 3-16 inch steel wire, ½ inch long. This will not show on the outside of the tire when on the wheel; neither does it weaken the tire like a rivet. I have often seen tires broken where the rivet went through. I never use the rivet and seldom the spike; but would recommend them to smiths, as in most cases they would get a better job.

In welding, first have your fire perfectly clean, your coal pretty well charred, and the fire hot but rather small, for the smaller the fire, if hot, the less it will waste your tire each side of the weld; have the borax charred; put a little on the weld while hot; pull the fire open carefully with the poker, and place the lap in the hottest part; roll a few pieces of coked coal on the weld; blow steadily, carrying your tire back and forward through the fire, or stop the blast a moment, until the lap is heated alike all through; take it out and weld with hammer and sledge. With this precaution you will never fail getting a good welding heat, and need not upset your tire before welding. If the tire is upset, before welding, it makes the lap so much thicker, that before it can be heated through alike there is liability to over-heat, and waste away the tire each side of the weld.

Some practice the rule of cutting off the tire the proper length, upsetting, scarfing, and punching the hole for the rivet before bending, getting the length by three times the thickness of the tire, &c.; but this rule is not reliable, for three reasons: first, I gave above in the thickness it makes the lap. Second, the exact measurement we have to be subjected to in determining the length of tire, in consequence of the opening in the felloe, &c. Third, a limber or soft tire will take up more in bending than a stiff or hard tire; and the consequence is, some of the laps or welds will have to be left thick and bungling, while others will have to be drawn thinner than the rest of the tire to make them reach the desired length.

In laying the tires down, the heaviest should be laid at the bottom, and leveled with brick, so that the tire will rest permanently on every brick or bearing, and the rest laid on top the way they will fit the best, to prevent warping the tire in the fire. A level stone should be used to lay the wheel on when the tire is put on. If the tire don't get warped in the fire, don't hammer them at all, without there is some kinks left in the tire in fitting them; avoid hammering, if possible, for it marks the tire; cool off gradually, pouring the water on out of the spout of a tea kettle, until it shrinks enough so it can be taken up; then roll it in soap water to prevent hardening, until it is so cool it will not burn the felloes, trueing up while the helper is rolling it in the water, with a mallet covered with thick leather, at both ends; let the third person take the wheel and finish trueing the tire with a leather-covered mallet as above; while it is so hot that you can't bear your hand on it, the felloes move easily then under the tire, and should not be moved after they get cooled off, if it can be otherwise avoided; for this reason, when the tire gets cold, all its roughness and imperfections become imbedded in the felloe.

The tire once moved will move the easier next time. After the tires are all on, examine the wheels, and see if there are any crooked spots in the tire that do not set down to the rim; should there be any, heat a short piece of iron, and lay on the tire, it will soon heat it, so as to burn the felloe, but take it off before that time, and rap it down with a hammer. It is a bad practice to heat the tires on a forge as some do, for, in trueing them in fitting, we have to bend them cold, and if heated on the forge, and one place red hot, you will often find there a short crook edge-wise. If some of the wheels are dished more than others, put them on the off side of the carriage. Never take a tire off, if it can be avoided, without it is so loose or tight, as to spoil the wheel when run.

H. D. F.

I am somewhat surprised that "VICTIM" should feel himself slighted with my invitation to "abler exponents" upon the question of rim-binding of the wheel. My invitation was general, and not intended to make a specialty for or against any member of the trade. Should the above fail to assure "VICTIM" that no slight was intended, I now make it a specialty to extend to my friend "VICTIM," an invitation to introduce what he has styled a raking investigation for the benefit of the many readers of the JOURNAL, as well as myself.

I am thoroughly impressed with the importance of the question as above referred to, viz: rim-binding; and, inasmuch as the question, as above, is of such vital importance, it is very necessary that the same should be thoroughly investigated, and that, too, in and with the single object, *namely*, the correct principle. To accomplish this, the question should be handled carefully, and not surmisingly. Experimental knowledge is what is required, and not the speculative; wit and humor have their proper place, and are there looked for by the reader, and should not be mixed up with the solid *shot as a decoy*.

The reader will suffer me to press on his behalf, as well as for my own benefit, that friend "VICTIM" furnish the JOURNAL with a clear or comprehensive statement, and not hint at such important questions. Let him evacuate his old stronghold, *sarcasm*, and come out on the open field and show his hand on things substantial.

"VICTIM," on the manner of driving spokes, informs us that "it is a common practice among wheelers to drive their spokes in a wheel-horse similar to the cut heading the Wheel Department." He further says that "a better way is to put the hub in the wheel-horse, and shape up the mortises, bringing them all to exact size." This brings us to inquire of "VICTIM," if he means to say, that in order to make a wheel correctly, it is necessary that all the mortises should be of the same exact size? Taking for granted that he means what he says, I should venture to assert that, if "VICTIM" follows the above as a correct principle, and durability is the result, then we must acknowledge that our experience has been false, and our former statements all humbuggery; while we are not, as yet, convinced as to his theory, we, at the same time, feel disposed to give him another chance "for his white alley," as the school boys say.

A question or two will decide his claim to the same: first, is, or is not, one side of the hub harder then the other? second, is, or is it not, under *his* theory, necessary that all spokes be of the same temperament or quality of timber? Let us hear from you, "VICTIM," and we will chalk it down to the credit of the JOURNAL. The deponent further says, "as no machine-mortised hubs that he has seen, are mortised exact enough to put the spokes into without trimming." With reference to the point here made, I have but to say that I have never supposed that any wheeler, who has ever held a position under any employer, was so ignorant as not to have discovered the fact as referred to by "VICTIM," namely, machine mortised hubs. He next introduces the very essential part of wheel-making, that of fitting his spokes to the mortises. He tells us, "as the tenon should have considerable more squeeze at the end than at the shoulder, it is necessary that the mortise should slant towards the front, more than the amount of dish that is desired in the wheel."

Friend "VICTIM," I should have preferred that you would have been more definite in fitting your spokes to the hub. You tell us that we should squeeze them more at the end of tenon than at the shoulder. Now, this word "*squeeze*" is, to my mind, very indefinite. I am not disposed to attempt to gainsay what you have asserted at present; but must insist that you define what you assert, by giving us some tangible evidence, or, in other words, a rule by which we can be governed as experimenting practitioners of your theory.

It cannot be possible that you wish your brethren of the fraternity *to become the victims of misplaced confidence*. I shall wait patiently for you to define your position on all of the above questions, and, in the meantime, take up some other points, as set forth in your former communications. My duty to myself, as well as my brothers of the fraternity, demands that a correct principle should be set forth. "VICTIM," your theory with reference to driving spokes on the rimming-horse, in preference to using the wheel-horse, is one that I must confess I do not comprehend. You state that you can drive a spoke much tighter with less labor, and not be so liable to damage the spoke.

Now, I am disposed to think that I can drive a spoke in the wheel-horse that will give satisfaction to any carriage driver, and, independent of this, it is not a correct principle to drive a spoke too tight, as will appear from your own statement, if you set the correct principle governing the construction of the wheel. I must say to you, "VICTIM," that I must have more legitimate reasons produced before I can gobble up the idea; therefore I must join in your request, *leaving out, "try it you who never have;"* but to those who have or may experiment, and if you find that you have received any benefit from said experiment, then chalk it down to the credit of "VICTIM," and to the benefit of the JOURNAL.

MIDDLEBURY, VT., Jan. 10, 1870.

MR. EDITOR:—One word more on wheels, if you please. I agree with your correspondent, H. D. F., on pages 56 and 57, (December number,) about the number of smiths that understand setting tires, and the same remarks will nearly hold good if applied to wheel-makers. Much has been said about setting spokes in the hub, but little about rimming. It is necessary that the tenon and shoulder should fit properly to the felloe, and *indispensable* that the tire rest *firmly* on the tenon, if not, the shoulder will soon wear into the rim, and let all of the dish that is sprung into the wheel, by setting the tire, run out, and the wheel become rim-bound, and, without re-setting, will soon be ruined.

Yours, truly, I. A.

Such a diversity of opinion existing among wheel-makers, as to whether or no the spoke-tenon should be flush with the outside surface of the rim, or sunk below its level, we would invite correspondence from any of our readers who may have practical tests to offer in favor of the best mode.

Send in your ideas, friends; a little friendly controversy will benefit all concerned.—ED.

☞ Don't fail to read our CLUBBING RATES with other periodicals, which will be found in the back part of the JOURNAL proper. We have been induced to adopt this course from a knowledge of the fact, that a great many of our readers desire to take other weeklies or monthlies than those devoted specially to their trade. A good opportunity is now offered to obtain the JOURNAL and one or more others, at a reduced rate.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 58.)

IRREGULARITIES ON SURFACE OF VARNISH.

Varnish is subject to various changes after having been applied to a body or carriage-part. It crawls, runs, enamels, pits, blotches, sags down and hangs on the lower edges of the panels, smokes or clouds over, has the appearance as if dust had been dredged on it through a piece of fine mull; or, as happens with carriage-parts, gathers up and hangs in heavy ridges or beads along the centre of the spokes.

These irregularities will happen at times with the best quality of varnish in the market, and while being used by workmen of undoubted skill, surrounded with everything necessary to insure perfect work, proving, conclusively, that atmospheric influences alone often cause irregularities on the surface, known by the terms mentioned above. But, while this may be true, there is no doubt that the finisher may be to blame in some cases for an imperfect job.

Extreme heat in the summer, and cold in the winter, each exert an influence. Heat, by melting down the varnish, or, when charged with electricity, as when a storm is brewing, causing "pits." In winter, the cold retards varnish from settling equally, and may occasion "enameling" and "blotches."

By "crawling," the painter means that his varnish, immediately after having been brushed on, does not cling to the surface equally, but shrinks away from it in spots. This feature, presenting itself before the panel or space is completed, does not occasion much trouble. The application of water, by means of a sponge, or a damp chamois, will remove the tendency at once. Spots on the panel already coated may be corrected by blowing the breath on them, which will contribute enough dampness to make the varnish cohere when again brushed over. A glossy surface must be haired or rubbed down with ground pumice and water. Varnish crawls more frequently when the surface to which it is applied is cold. Whether the act of brushing produces electricity, or the surface was already excited by some mysterious agency, we are unable to say. The varnish is repelled by some means, and behaves as when poured on a piece of glass that has been slightly rubbed with paper.

"Runs" should not be *always* charged to the finisher, although we admit that, in the majority of instances, he is to blame. We have seen varnish that would sag, or "run," when applied in the usual manner by the most skillful workmen; sometimes on a body after a few hours, and on carriage-parts after several weeks had elapsed. The varnish referred to was too soft, not possessing the property of increasing in volume on coming in contact with the air, and supporting itself by adhering in a continuous body.

When a heavy coat of varnish has been laid on, and any portion of it slighted by the brush, the part slighted will be very apt to run, because the varnish has not been blended in with that which immediately surrounds it; it hangs alone, and somewhat heavier, and seeks a level or space to incorporate itself with the other varnish, but, except in a few instances, fails to find it.

A finishing varnish that will accommodate itself to the space required to swallow up a run, without assistance from the painter, is prized very highly. Runs under the mouldings, and out of corners, are occasioned by the manner of laying on the varnish. A surface cut up by mouldings into large and small spaces, should not have an equally heavy coating, as the smaller spaces will not support as much varnish as the larger ones; and where the mouldings join, forming corners, allowance should be made for the tendency of the varnish to collect, and by its own weight follow along guided by the mouldings and at length sag down. It is better to lay on a heavy mass of varnish on the large spaces, and afterward work it up toward and on the mouldings, than to begin on the mouldings first.

"Enameling" is an appearance as if a piece of enameled leather had been pressed on to the surface of the varnish. The term is used by carriage painters only; or, at least, it originated among carriage painters.

A coat of varnish, put on another which is not hard, will often shrivel up, because it has no chance to set evenly, the under coat being checked in drying; the outer coat will sink in, and the two coats combine, forming, as it were, one coat, neither of which can dry properly.

Rubbing varnish, added to a finishing varnish, will act in the same manner, unless they be thoroughly incorporated by remaining together for several hours.

Rubbing varnish drawn off at the bottom of the can will be apt to enamel.

"Pits," or pock-marks occur under the following circumstances:

1st. When japan is added to force the drying.

2d. When a quick-drying varnish is added to one of a high grade.

3d. When a storm is gathering in hot weather, before the rain falls, varnish that has been applied will often pit.

4th. Steam rising from a wet floor, in a close room, and having no means of escape.

5th. Difference in the temperature (in winter) between the varnish and body, or the room cooling off at night before the varnish is set.

6th. Laying on the varnish too heavy without properly brushing it through.

7th. When the walls attract dampness in summer.

A varnish that pits will first appear dull, the next change that follows will be collapsing of the surface.

When a job has pitted, take a varnish brush, and, beginning at the top, lay on a heavy coat of turpentine, and as the varnish is softened up, scrape it off with a piece of harness leather sharpened on the edge like a chisel. Scrape the varnish up and put it in a cup. Continue this until all is removed, then with soft rags and clean turpentine wipe it over again; the stickiness of the turpentine remaining on the surface remove with a mild soap. The pumice stone and rag must follow, and when the job is perfectly clean, and again touched up, a second trial will probably produce a perfect finish. It is a waste of time to attempt to rub out the pits.

"Sagging down" off the panel is wholly the fault of the varnish; it is too oily, and will not remain "where it is put." *Remedy*, send it back.

"Fine dirt." When a varnish is laid on clean, and looks full and rich when finished, and the following day appears as if it had been sprinkled with dust, it lacks body, either from being too new, or from the process of manufacturing.

A high grade varnish, that has become very cold while in the tanks, will sometimes act thus, we have been informed, but we cannot speak from our own experience.

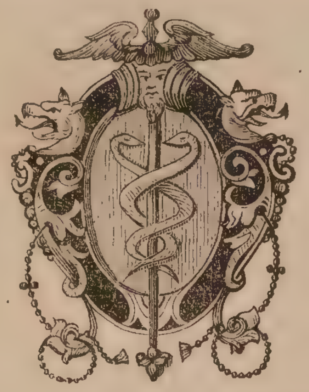
A very heavy coat of varnish, on a body or gearing, or a very light one, neither produce the best work; a medium coat should be the rule.

ORNAMENT—Suitable for door panels. It is drawn, as will be readily perceived, by the use of the oval. The centre is filled in with the CADUCES, a Roman emblem, which is no doubt familiar to most of our readers.

The rod, or centre staff, on which the wings are represented "displayed," and around which two serpents are twined, signifies *power;* the wings, *fleetness;* the serpents, *wisdom.*

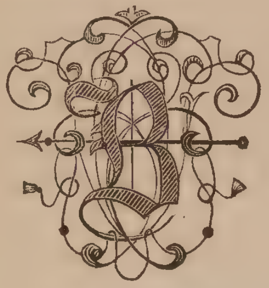
This pattern will please the eye if every part be laid in gold; but there is an opportunity afforded for a display of coloring which, for practice, if for no other purpose, should be seized upon.

In sweeping the curves, pay no attention to the minor details, for on the gracefulness of these "lines of beauty," as Hogarth termed them, the appearance of the ornament must depend.



Having secured the outlines, fill in on them whatever leafing is shown.

INITIAL LETTER B, (*German Text.*)—Another form in which an initial letter may be ornamented. The dart and the centre line of the letter divide the whole equally, and in producing this pattern were the first lines laid down. The outline of the letter followed, the two main curves which stand perpendicularly next, and from these the remaining scrolls were added.



In the attempt to paint this on a panel, the novice would probably fail to produce a good ornament, for the simple reason that he would be compelled to mark in all the scrolls, and as it is impossible to give them their exact place on the panel, he would confuse the design or lose sight of it. The skillful ornamenter would mark on the main curves only, and afterward fill in according to the spaces that remained.

Lay in letter, dart and cord, gold. The rest with a purple tint, mixed of flake white, ultramarine blue and carmine; the lights with pink, made of carmine and white.

MR. EDITOR:—Would you be so kind as to inform me, in the next number, what will make a good and pretty straw color. I use keg lead and chrome yellow; it looks streaky, and fades.

Yours, &c., J. T. C.

ANSWER.—Having prepared a suitable ground work, take either china or flake white, (dry) and Oxford ochre, instead of keg lead and chrome yellow. Those first named are purer in tone, and by their superior qualities remove the difficulty complained of. Or, use flake white, lemon chrome, and a very small quantity of vermilion. Delicate colors are more or less influenced by the color of the ground work on which they are laid; so that, to secure a clear pure tone of straw, and similar colors, the under coatings should be white or nearly so, yet having no tendency toward lead color. A flesh-colored ground work would not be objectionable, still not as good as clear white or a pale yellow.

Having purchased the best quality of the colors above named, to prevent sullying them by mixture, use no *dark* brown japan as a dryer; oil and sugar of lead, or varnish, answering the purpose better. The paint mill and the cup into which the paint is ground, as well as the brushes, should be *perfectly* clean. Having taken these precautions, the color should be applied somewhat heavier than those having more opacity. Two coats and color and varnish should cover solidly.

Use the palest varnishes; the dark hard-drying rubbing varnish will give a streaked appearance. The finishing coat must not (on a carriage-part) be laid on as heavy as for darker colors; for, if there are any laps or runs, they will appear darker than the surrounding colors, thus giving a muddied appearance.

MILLVILLE, PA., January, 1870.

MR. EDITOR:—I have been a reader of your valuable JOURNAL for some time, and have been especially pleased with that interesting and instructive feature of answering questions, and take the liberty of asking some, which I shall be pleased to have you answer.

1st. We have been using silver leaf on some of our work, and have been obliged to remove it on account of turning black before leaving the shop. What is the cause?

2d. What is the best plan to pursue in repainting old carriages when the paint is badly cracked up? and what is the cause of paint cracking in the first place?

Yours, respectfully, E. E.

ANSWER.—*Pure* silver leaf is too costly to be used for general purposes by the painter, and therefore, in its stead, an imitation of silver is manufactured. Some of these imitations contain a certain per cent. of silver, while others may be entirely free from it, as, for instance, Dutch metal.

Pure silver will tarnish when exposed to the air, or the action of acids. Silver spoons, when laid away, wrapped in blotting paper, will appear tarnished when again exposed, proving that this metal is naturally inclined to blacken, and is, therefore, unfit for the carriage-makers' use, except for small ornaments.

The leaf you laid on was not *silver*, but that which is sold for silver, and had it been *pure* silver leaf, the action of sulphurous smoke from the stoves or smith shop, together with acids in the turpentine and gums, of which the varnish is composed, would be sufficient to blacken the leaf. Gum copal contains a powerful corrosive acid, and as turpentine and oil also contain a portion of acid, the action of these, with the exposure to the air, or sulphurous smoke, before the varnish was applied, combined to produce the result stated in your letter.

The remedy would be to coat the leaf with a white varnish free from acids, and which would not crack under the after coatings, or permit the copal varnish to penetrate through it. We know of nothing that would *fully* answer the purpose.

Demar varnish would be a partial remedy, but its poor wearing qualities render it unfit for carriage work.

ANSWER TO QUESTION SECOND.—When a carriage is badly cracked, the better plan is to remove all the paint by heat, applied by the use of a red-hot iron, a charcoal furnace; or, which is best, a gas jet.

Alcohol and turpentine, equal parts, put on and ignited, will answer.

The gas jet heats slowly, and softens the paint sufficiently to admit of its being removed before the heat has penetrated far enough down to injure the joints, or draw the oil out of the wood.

Having removed the cracked paint, the job must be carried through the same process as when first painted, (provided you get paid for it.)

Paint may crack because too much oil was used; and again, may crack on account of the oily principle being dried out.

The cracking in the first instance mentioned would result from the under coatings not being thoroughly dry when the carriage was completed. Afterward, as the drying proceeded, space was required for the evaporation going on, which manifested itself by an explosion, which rends the outer surface.

2d. When paint or varnish has been long exposed to the action of the weather, the oily principle becomes dried out, the resinous parts only remaining, which contract, producing cracks.

Japan, in which gum shellac forms a part, is very liable to crack, because the gum swells in dissolving, and contracts a great deal in drying. This is true, to a certain extent, with other gums.

Paint cracks similar to the mud in a creek bottom. The summer freshet rises up over the soil, saturating it, the water falls, leaving the pasty mass exposed to the sun's rays, which draw off the water by evaporation. The surface would at first be crusted over, and as the heat continued, the under-wetted mass, by evaporation, would break through the surface crust, and find vent in every direction, generally breaking through in straight lines, which incline toward the circular form.

On patent leather the circular form of cracks is very perfect.

NEW VIENNA, CLINTON CO., OHIO.

MR. EDITOR:—Please answer through the JOURNAL the following: All the work that I painted last winter and spring, when run out of the shop a few days, blistered and scaled off. The last job went out in September, and it blistered. Can you tell me the cause? Some of the work was kept on the second floor, and other on the ground floor. It is the first time that the work blistered for me. Let me also know the price of a brush to put on Piotrowski's permanent wood filling.

Yours, &c., O. G. E.

ANSWER.—New work, when run out in hot weather, will blister easily if the last coat of varnish was not hard when first exposed to the direct rays of the sun, or to the reflection from a heated pavement where the carriage may have stood for some length of time.

Work painted during the winter, which had ample time in which to dry, both in the color and the varnish coat, should not blister so readily; still, it cannot be proof against the extreme degrees of heat to which our climate is at times subject.

If you have not been troubled previously with blistered work, and the timber was well seasoned in the jobs you mention, and your work painted in your usual manner, the fault must lie either in the inferior quality of the oil or japan made use of. The foundation painting must have formed only an enamel on the wood, not having sufficient tenacity to resist the action of heat, which, when applied, raised the coatings from the wood in the form of blisters.

SHEARS, NEEDLE & TACK HAMMER

T. ACKS EDITOR

This being the season when some of our readers are engaged in trimming sleighs, it may not be out of place to say something on the subject; but we cannot lay claim to anything original in the line of sleigh trimming, for the reason that, in our particular locality, little or none of it is done; but we have opportunities for seeing some very fine jobs, and, among them, we particularly noticed the *four-in-hand* turn-out of the now celebrated *Helmbold*, who advertises his "Buchu" so extensively, and whose palatial drug establishment, on Broadway, New York City, almost rivals our boyhood's idea of Aladdin's Palace; and his extravagant notions of "what is the thing" in carriages, are perfectly in keeping with his style of doing business.

Our attention was called to his sleigh, by seeing quite a crowd of people around the front door of the "*Herald*" office, during the late spell of sleighing; pushing our way among the crowd, we found they were engaged in viewing a splendid sleigh, with a body shaped something like a Landau, and painted and gilded in flaming style, while a fine looking Fifteenth Amendment held the lines and flourished his whip from a very high-set dickey seat, over four splendid prancing bay horses; and another stylish black joker, with arms folded in regular orthodox "tiger" style, sat in a very high rumble, at the back of the equipage; both of these servants were dressed in blue cloth livery, with immense gold or gilded buttons, white-topped boots, stove-pipe hats, and black bear-skin capes and gloves.

The sleigh had a Landau top; the bows covered with black cloth, inside and out, in place of leather, made to fall, as in the Landau, back and front; all the edges trimmed with strips of black bear-skin, about seven inches in width. The robes were to match, of bear-skin. The body of the sleigh was trimmed with purple velvet; the backs made in rolls and half diamond; the cushion tops squabed in half diamond; the cushion fronts and facings of the seat falls had zig-zag raisers, covered with the velvet and stitched with silk, and all finished with patent-leather welts.

In the accompanying cuts, *Fig.* 1 shows the style of the back, which, being simple in contruction, will not need a detailed description; *Fig.* 2, showing the cushion, front and fall, which are very tastefully ornamented.

The harness was splendidly mounted with princess metal, while over the saddle of each horse was a turreted arch, supporting seven sweet-toned silver bells; taken altogether, the "turn-out" was simply gorgeous, but reflects great credit on the manufacturers, who got it up so well and completely finished.

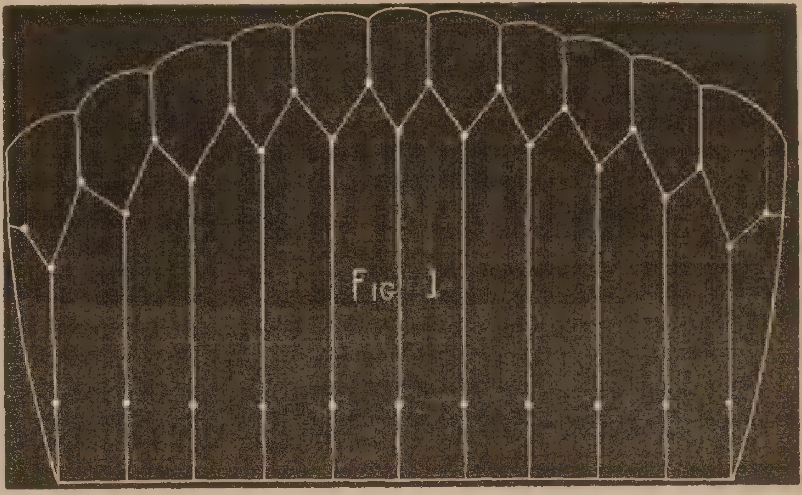


FIG 1

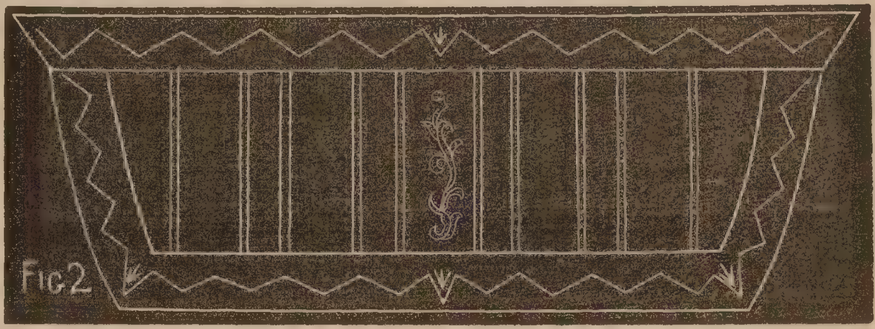


FIG 2

Remedies and Receipts.

IF chocolate, coffee, jelly, gruel, bark, &c., be suffered to boil over, the strength is lost.

STARCH made from rice flour, and sometimes sold as "gummed starch," gives to linen done up with it a peculiarly rich gloss.

TIN VESSELS, if kept damp, soon rust, which causes holes. Fenders and tin linings of flower pots, &c., should be painted every year or two.

ISINGLASS, or gum arabic, dissolved in the rinsing water of gauze, shawls and ribbons, is good to stiffen them. But a small quantity is necessary.

VEGETABLES will keep best on a stone floor if the air be excluded. Meat in a cold, dry place. Sugar and sweetmeats require a dry place, as does salt. Dried meats, hams, &c., in a cold but not damp place.

BEEF TEA.—Cut a pound of fleshy beef in thin slices; simmer with a quart of water twenty minutes after it has once boiled and been skimmed. Season, if approved, but it has generally only salt.

CRANBERRY JELLY.—To one quart of berries put one pint of water and one pint of sugar, and let them boil half an hour without stirring; then take off the jelly with a spoon, and what remains makes a good sauce.

ACID FRUITS should be cooked in bright tin, brass or bell-metal, and poured out as soon as they are done. Brown earthen vessels should never be used, as they are glazed with white lead, a poison which readily unites with an acid.

Cooking Utensils.—Metallic utensils are quite unfit for many uses, and the knowledge of this is necessary to the preservation of health. Silver and iron are preferable to other metals. Copper and brass are both liable to be dissolved by vinegar, acid fruits and pearlash. Such solutions are highly poisonous, and should not be allowed to remain in vessels of this kind more than an hour.

Miscellaneous.

On the Time Required to Discriminate Color.

In a recent number of Pfluger's *Archives of Physiology*, MM. Burckhardt and Faber describe an apparatus consisting of a pendulum of wood with a movable leaden weight attached, which has a slit at its lower end. While this slit vibrates behind a second narrow fissure, a momentary transmission of light occurs, the duration of which can be varied by raising or lowering the weight of the pendulum, or by increasing or diminishing the width of the slit. The source of light consisted of a milk-white glass plate, illuminated by a petroleum lamp, and colored glasses of various tints were introduced into the slit of the pendulum. The intensity of the light was regulated and modified by the withdrawal of the lamp from the white plate, or by the interposition of smoked glasses, and in each experiment the observer was required to state what color shot across the slit. In the first series of experiments the intensity of the illumination required, when permanent, to enable the observer to state with accuracy the color perceived, was investigated; as well as the degree at which all perception of color ceased. In both series bright yellow occupied the first position; red and violet the last. It was also observed, that with transient illumination, bright yellow gave the most distinct sensation with the smallest amount of light and the shortest duration. After this color, there followed with Burckhardt, yellow, bright blue, blue, green, grass-green, violet, red; and with Faber, yellow, blue, green, grass-green, clear blue, red, violet. Experiments were then made to determine the intensity of the light requisite for the accurate perception of color, the duration of which was only .0029 of a second, together with that required when the impression was persistent. They found the relation for all colors nearly equal in the same individual, though widely different for the two observers, the proportion being with Burckhardt as 173 to 1, and with Faber as 513 to 1. They conclude, thence, that the various colors must have the same or nearly the same brightness, in order, with a minimum duration, to yield a minimum sensation of color. The experiment, with more protracted duration of the impression, showed that the intensity of the excitation necessary to produce the least possible sensation of color, does not diminish proportionately with the increase of the duration of the stimulus.

Periodicals.

The Mechanic and Inventor, "devoted to practical and reliable information regarding patents and patented articles," is a very valuable paper, offering an excellent medium for bringing new inventions before the public, especially in the West. It is published monthly, at 50 cents a year, thus placing it within the reach of even the apprentice. Address Thos. S. Sprague, No. 1 Arcade Buildings, Detroit, or Nos. 20 and 21 Major Block, corner Madison and Lasalle streets, Chicago.

Zell's Encyclopedia.—Monthly part, No. 18, has reached i-a-z, in the letter D. Diaz, the name of a Portuguese Navigator, is the concluding word. The pronunciation given, softens down the hard sound we would naturally give Z, and we have Dee-ath, which is very pleasant. Sample copies ten cents. Address "Office Zell's Encyclopedia," 17 and 19 South Sixth street, Philadelphia, or any of his agents.

The Christian Union, with January 1st, 1870, enters upon a new series, in which the Rev. Henry Ward Beecher assumes a personal responsibility as its editor. The main object of this family journal is to "persuade christians of every sect to treat one another with christian charity, love and sympathy," and unite, not as one church, under a universal name, but in a "oneness of christian sympathy." A "cartoon" of the "Nativity" accompanied the Christmas number, which we prize very highly. The Christian Union is published weekly. Terms of subscription, $2.50 per annum, payable in advance. Single numbers, 8 cents each. Specimen copies sent on receipt of a two-cent stamp for postage. Address J. B. Ford & Co., publishers, 39 Park Row, New York.

Oliver Optic's, January 15th, 1870, is received. "Bear and Forbear, or the Young Skipper of Lake Ucayga," by Oliver Optic, is continued, and appears very satisfactory to "Our Young Folks." "Cracker's Luck," by L. A. B. C. gives us a very life-like pen picture of street scenes, in which the newsboys figure conspicuously. Honesty and dishonesty are contrasted, honesty receiving its reward. "An Adventure in Central America," by Willy Wisp, &c., &c. Specimen copies sent by mail, postpaid, to any address. Lee & Shephard, publishers, 149 Washington street, Boston.

Hall's Journal of Health, for January, 1870, has reached us. "Dyspepsia," which has been called "the American disease," is noticed in a lengthy and very interesting style, showing the cause, and giving the remedy for this terrible disease, which is brought on by indiscretion. The Journal of Health should find a place in every household. Published in New York City. Price, $2 a year.

Vick's Floral Guide for 1870.—This is the ninth annual catalogue which has been published by Mr. Vick, and, judging from its contents, it must be a faithful guide to all lovers of flowers. It is fully illustrated, the engravings are perfectly executed, and the body of the work contains information which must have taken a great deal of brain-work to compile. The first edition of one hundred thousand copies is published and ready to send out. It is elegantly printed on fine tinted paper, with about 200 fine engravings of flowers and vegetables, and a beautiful colored plate. It gives plain directions for the culture of flowers and vegetables. Forwarded by mail for ten cents. Address James Vick, Rochester, N. Y.

The Manufacturer and Builder, Western and Company, Publishers, 37 Park Row, N. Y.—The January number has been received. It contains a great variety of valuable matter, among which we may mention "Calico Printing," "Practical Hints in Carving Wood," "The Springing of Timber," "Framing Buildings by the Scribe or Square Rule," "An Economical Way of Ventilating Living Rooms," "Frailty of American Architecture," "Welding by Pressure," "Building Chimnies," "Value of Ice," &c. Price, $1.50 per annum; address as above.

CLUBBING WITH OTHER PERIODICALS.

We will send any of the following Periodicals with the Coach-Makers' International Journal, for one year, at the rates below, to any who are not now subscribers to them:

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*To every subscriber for the *Independent*, sent with Journal subscription, we will furnish, free of charge, a copy of Ritchie's splendid steel engravings of Grant and Colfax, (the price of which is $2 each.)

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

Wanted—A Carriage Smith and Painter; *strictly first-class men*—none other need apply. Correspond with Quimby & Hallowell,
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CASH
Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY

SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, January 20, 1870.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.
Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.
Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50
Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.
" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.
Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.
Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.
Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.
Basket-wood imitation, for panels, per foot 60c.
Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.
Bolts, Phila., 40 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.
Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.
Buckram, per yard, 16 to 20c.
Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.
Castings, mall, per lb., 13c.
Cord, seaming, per lb., 25c.
Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.
" body, per yard, indigo wool-dyed, $3.75 to $4.50.
Coteline, per yard, $4 to $8.
Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.
Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30; English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.
Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.
Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.
Drugget, felt, per yard, $1.35 to $2.
Enameled cloth, per yard, muslin, 5-4, 31c.; 6-4, 45c.; drilling, 5-4, 44c.; 48 inch, 46c.; 6-4: 62c.; duck, 5-4, 58c.; 50 inch, 63c.; 6-4, 70c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 55c.; 48 inch, 60c.; flock drill, 48 inch, 90c.; do., muslin, 80c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.
Felloe plates, wrought, per lb., 14c.
Fifth wheels, Cincinnati pat., ea., ⅝, $1.37; ¾, 1.50; New York pat., ⅝, $1.12; ¾, $1.20.
Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.
Hair, curled, per lb., H. & B., 19c.: No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.
Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.
Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $3.75.
Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.: narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.
Lamps, per pair, fine, $15 to $30.
Leather, per ft., dash, No. 1, 13½c.: do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 25c.; do., No. 2, 22c.; enam. trimming, 23c.
Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.
Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.
Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.
Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30: No. 3, cuts ½ to 1 inch, $40.
Moss, per lb., 10c. to 15c.
Name plates, per do., en., German silver, $4 to $4.50.
Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.: do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
" Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $2.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.
Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2 15; 1⅛, $2.50; 1¼, 2.65.
" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
" ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.
Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $12
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.
Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.
" Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 23c.; 1½. 3, 4 and 5 plates, not shorter than 33 inch, 22c.; shorter than 33 inch, per lb. extra, 3c.
" Bright oil-tempered, per lb., 1¼ inch, 20c.; 1½ inch, 19c.
" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.
Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.
Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.
Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.
Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.
Top holders, Thomas patent, buggy, $5 each; extension, $7 each.
Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1 .25; Thomas' wrought with plated nuts and rivets, $1.35.
Thread, pat. linen, Stuart's, per lb., No. 25, $1.30; No. 30, $1.50; No. 35, $1.70; No. 40, $1.90.
" Shoe, H. B., per lb., No. 10, 75c. to $1; No. 3, $1.10 to $1.40; No. 12, $1.40 to $1.80.
" dark blue, per lb., No. 10, $1.25; No. 3, $1.75; No. 12, $2.
" machine, Marshall's, Shrewsbury, black, No. 432, $3; No. 532, $3.50; No. 632, $4.00; white, 50c. per lb. extra.
Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.
Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.90; No. 30, $2.10; No. 35, $2.40; white, 40c. per lb. extra.
Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,
Tufts, per gross, common worsted, 18c.
Twine, tufting, per lb,, No. 16, 50c.; best mattress, 85c.
Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.
Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.
Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.
Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.
Whip socket fasteners, $3.00 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.
Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash, red oak and common hickory, per sett, 1,
" 1⅛ 1¼, $1.25; 1⅜ $1,50; 1½, $1.75.
Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2. 25 per set.
Poles, hickory, per dozen, rough, $12: finished, $16.
Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.
Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.
Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
" " double " $4.50 "
Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.
Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.
Seat arms, per dozen pairs, $1.25.
Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.
Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.
Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.
PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.
PAINTS—Black—Raven's Wing drop, per lb., 40c.: refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.
Blues—Pure Chinese, per lb., $1.20; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.
Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.: pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.
Reds—Best carmine, No. 40, per ounce, $1.50; fine crimson or claret lake, per lb., $3.00; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 45c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.30; deep, $1.20; Ger. gotn. pale, $1.40; deep, $1.30; Chinese, $1.30; Trieste, $1.20; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.
Whites—Pure lead, per lb., 13c.; Colorado lead, 12c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.: whiting, 4c.; pure dry lead, 13c.
Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,
Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.10; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.
Varnish—0, 75c.; 00, 85c.; 000, 95c.: 0000, $1.10.
Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.
Best Paint Mills—Large, $8; small, $6.50.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, for balance of present volume, for 75 cents each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

HARPER, HENRY, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winsted, Conn.

Brush Manufacturers.

*THUM, CHARLES D., 150 North Third street, Phila.

Carriage Body Manufacturers.

EVANS, C., 59 Rosette street, New Haven, Conn.
NORCROSS, H. S., (light,) 1712 Coates street, Phila., Pa.
SHEW, LEVI W., 127 Park street, New Haven, Conn.
TOWNSEND, C. T., 116 Dixwell av., New Haven, Conn.

Carriage Bolt Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDON, A. & M., 22d street, above Vine, Phila., Pa.
*SCOTT & DAY, 38 North Third street, Phila., Pa.
SHIELDS, WM., 23d street, above Race, Phila., Pa.
*SKELLEY, T., 24th st., below Callowhill, Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.

Carriage Castings.

*FITZGERALD & FLAGG, 218 N. Third st., Phila., Pa.

Carriage Wheels.

BROWN, S. N. & CO., Dayton, O.
LA FARGE, I & J., Rahway, New Jersey.
*WOODBURN, SMITH & CO., 2d & Green, St. Louis.

Coach Hardware and Trimmings.

*ATWATER, H., 1625 Market st., Phila.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
HIGH, J. J. & L., 156 Grand street, Rahway, N. J.
KEIM, GEO. DeB., 162 North Third street, Phila., Pa.
KENNEDY & CO., 305 Arch street, Phila., Pa.
*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*ROUSE, J. G. & CO., 4th & Arch sts., Phila.
*SCOTT & DAY, 38 North Third street, Phila.
SNYDER, W. & A. J., 115 North Third st., Phila.
STOTESBURY, J, M., 56 North Third street, Phila.

Carriage Draftsmen.

*MULLER, A., 142 Second street, New York City.

Coachmakers' Tools.

WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

Coach Lamps.

*CAREY & POST, 234 Carter st., Phila., Pa.
*NIXON & WIGLEY, 39 North Seventh street, Phila.

Felloe, Spoke and Shaft Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Fifth Wheel Manufacturers.

HAYDEN & LETCHWORTH, Auburn, N. Y.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*SCOTT & DAY, 38 North Third street, Phila.
*WOODBURN, SMITH & CO., 2d and Green, St. Louis.

Iron Merchants and Manufacturers.

*ATWATER, H., 1625 Market st., Phila.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.

Ivory and Horn Turners.

*ATWATER, H., Agent, 1625 Market st., Phila.
HACKERT & CO., 99, 101 and 103 E. Houston st., N. Y.

Paint and Varnish Brushes.

*FELTON, RAU & SIBLEY, 136 North 4th st., Phila.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*THUM, CHAS. D., 150 North Third street, Phila.

Permanent Wood Filling.

*VALENTINE & CO., Boston, Mass.

Rubber Enameled Carriage Cloth.

*ODORLESS RUBBER CO., 19 Park place, N. Y. City

Paints, Oils and Varnish.

*FELTON, RAU & SIBLEY, 136 N. 4th street, Phila.
LUCAS, JOHN & CO., 141 North Fourth street, Phila.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., Phila

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

*CROWELL, DAVID, Wood Works, Rahway, N. J.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Spring Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*GARRETT, KENT & CO., (Agents,) Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.

Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

*ATKINSON, W. & CO., 1270 Broadway, New York.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

*FELTON, RAU & SIBLEY, 136 N. Fourth st., Phila.
*GARRETT, KENT & CO., Wilmington, (Harland's.)
KEYSTONE VAR. & JAP. WORKS, 313 Race st., Phila.
*MINETT & CO., 60 Pearl st., N. Y., & 7 S. 10th st., Phila.
PARKER & GILLESPIE, 228 Pearl st., New York City.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*SMITH, EDWARD & CO., 161 William street, N. Y.
*VALENTINE & CO., Boston, Mass.

AYRES, LIPPINCOTT & CO.,

WHOLESALE DEALERS IN

CARRIAGE MATERIALS AND SADDLERY HARDWARE,

No. 49 NORTH THIRD STREET,

PHILADELPHIA.

We invite the attention of Manufacturers and Dealers to our complete stock of goods in the Carriage line, which we propose to sell at the lowest market rates.

Our facilities in the purchase of goods, in large lines, often enables us to supply them below Dealers and Manufacturers **PUBLISHED** prices.

MATHIAS SHOEMAKER,

MANUFACTURER OF ALL KINDS OF

ELLIPTIC COACH

AND

PLATFORM SPRINGS,

From Best English Brand of Steel, Warranted,

1439 HUTCHINSON ST., BETWEEN 9TH & 10TH

PHILADELPHIA, PA.

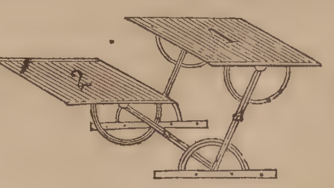


Fig 2 represents Seat thrown to Dash for Children.

Fig. 1 represents the ordinary position for Seat.

FLEMING'S

Patent Adjustable Seat Iron

For Jump, Turn-over and Moveable Seats, ready made for immediate use.

The neatest and cheapest seat iron used. Price, complete, $4 and $5 per pair.

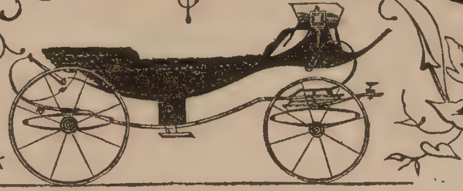
HOWELL ATWATER, (Carriage Hardware Dealer,)
MANUFACTURER AND AGENT.

I am manufacturing an extra quality of Fifth Wheels. I also call the attention of buyers to the following agencies of goods, which I am enabled to sell at manufacturers' prices:

Iron and Steel Works—Springs and Axles
Mt. Carmel Works—Best Coach & Carriage Axles. Steel & Iron.
Flesche & Perpente—Ivory, Rubber and Bone Trimmings
Smith & Saward's Goods.

WHOLESALE & RETAIL. Address, *H. ATWATER,*
1625 Market Street, Phila.

COACH-MAKERS'



INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 6. MARCH, 1870. $3.00 PER ANNUM Always in Advance.

SPRING TIME.

We can hardly realize the fact that the winter months have passed away, and that this number of our paper is dated March, 1870. The winter has been mild and pleasant, which probably accounts for it. Time drags along heavily in our cold Northern climate when the winter is severe, although we are accustomed to look forward to and prepare for the many inconveniences with which it surrounds us. Our expenses are increased, the wheels of business become clogged, navigation is interrupted on some of our important rivers, and railroad connections broken; we cannot count on our mails coming regularly, and if we undertake a journey by rail, on pressing business, in all probability we will be blocked up by the snow, and compelled to wait several hours on the track, or at some out of the way station, where good accommodations are scarce.

And then, when we remember the suffering poor in our large cities, shivering over their scanty fires, and actually see little ragged, barefoot girls and boys, gathering bits of coal from the ash heaps, or begging a basketful at the coal office, it sends a pang through the heart; for those who are well fed and warmed must nerve themselves daily to face the piercing cold. But we manage somehow to shiver on through the rain, the sleet and the snow, and when at length the month of March dawns, we welcome its rough and windy days, in anticipation of the pleasant seasons but a short distance removed from us.

With the opening of spring comes the cheerful sunshine, warming up and awakening nature from her deep sleep. Our surroundings become more agreeable, we smile, speak kindly, and are more liberal; and as all classes are more or less similarly affected, business increases, and another harvesting season opens to all.

The ice-bound streams are again set free, and flow on, sparkling in their beauty, inviting those who do business on the waters to resume their traffic, and to those in quest of health or pleasure they present the choicest inducements.

Those who reside in the mountainous districts are relieved from the cold, dark shadows that have hung over them, and are cheered by the re-appearance of the mountain tops, crowned with verdure.

The plow and the harrow are brought out from their resting places, brightened up, and again put to work, preparing the soil to receive precious seed.

We submit to the inconveniences of winter, and may enjoy it, to some extent; but when spring time arrives we hail its advent, and are loth to part with the pleasant months it introduces. With what longings must the poor look forward to the days which bring the warm, cheerful sunlight into their dreary homes, warming them, yet demanding no pay. No more searching for fuel, or buying in scanty measure. What a blessing to them that sun heat is free, instead of being controlled by those who league together in order to enrich themselves speedily off the necessities of the people.

So far as we have been able to ascertain, the promise is for a lively opening of spring trade, which, if realized, will be accepted very thankfully by carriage makers. One thing may be relied on, which is, that carriage making will not prove to be very profitable, unless all other kinds of trade and manufactures are greatly prospered.

We hope for the best, and shall be pleased to hear ere long that our manufacturers have again put their men on full time, and even been compelled to hire additional help. Emigration is flowing in upon us at a rapid rate. Skilled artisans are coming now, who must find employment, and we believe that the wants of all will be well supplied.

We have no reason to complain, considering the prevailing dullness, for our subscriptions have come in steadily, and our orders for charts, cards, &c., have exceeded any former season, and continue to press upon us.

MONEY IN LETTERS.

We have repeatedly warned persons against sending money to us by letter, when we have such a perfect and safe system of remitting by postal order and registry; yet, despite our warnings, we are daily in receipt of money by letter, and it appears to be the nature of Americans to take the risk rather than trouble themselves so much as to obtain a postal order, or to have their letter registered. As fully one-half of our receipts for subscriptions come to us through the ordinary letter way, we are surprised that there is not more money lost than there is. So long as it reaches its destination safely, there is an end of the matter; but should a valuable letter be lost, or stick to the fingers of some sharp individual, thereby failing to find a lodgment in our box, in nine cases out of ten the sender will entertain doubts as to the honesty of the person to whom it was directed, and probably retain in his mind a lurking suspicion that the letter was received and destroyed, and the money misapplied. Now, this is not only unpleasant, it is vexatious, and we know of nothing that so speedily unstrings the nerves, as to be unable to find any clue to a missing letter, and feel, in spite of ourself, that we are breathing an atmosphere tainted with suspicion. The records are overhauled, the cash book and letters carefully examined, and an answer returned to that effect, and the reply comes back, "the letter must have been received, for I never had one to miss before," and probably some insulting remarks are added.

It has been our good fortune to be notified of but few money letters being sent us that were lost or stolen; but, few as they are, they have given us no little anxiety, especially when they come from persons who think everyone dishonest but themselves. The Government has provided the money order and registry systems, either of which afford a safe and cheap method of transmitting money, and we greatly prefer that persons should avail themselves of them. If in any section there is no postal order office, and a check or draft cannot be obtained, then send by registered letter, which may be done in any post office throughout the country.

We have published this in displayed type from month to month, and will continue to do so, and we repeat it here, money sent in either of these ways will be at our risk, and, if lost, we will be responsible; but under no other conditions.

The amount of money lost in a year would not make or break anyone; but the unpleasant circumstances connected therewith, destroy one's peace of mind and balance of temper. We have a well-regulated system of attending to mail matter, and it would be next to impossible for a letter to enter the office without being accounted for. The money, if any, would be immediately placed on the cash book, the names entered on the roll book, wrappers written, a minute made under the indorsement on each letter as to what had been done, answered when required, and filed away in its appropriate place. This is a daily routine, and becomes a second nature with us.

After all our painstaking, we may be excused from getting exercised, when we are informed *positively* by a writer, "that if *we* had not got his letter, it would have been returned to him." We have, for some time, felt it to be our duty to call attention to this matter thus pointedly, and we trust that this may be the last time we may have to deal with a subject so annoying, and that persons who are careless enough to send money by letter, will take the risk of dishonest post office clerks or others, and endeavor to have a little faith in the *honesty* of the person for whom the letter is intended.

Felton, Rau & Sibley's Miscellanea.

The above is the title of a neat little book of thirty-six pages, containing "valuable hints on coach painting and varnishing," a description of their place of business, also their advertisement. It is designed in part as a book of reference, and will doubtless be of value to a large number of those who work at coach painting, and also to those who desire an insight into the workings of the paint room. "Causes of imperfect varnishing," "Japan," "The varnish room and its contents," "The prevailing colors for 1870," "On gilding," "Transfer Ornamenting," and "The mixture of colors," are a part of the contents.

☞ Several new advertisements will be found in this number, due notice of which will be given in our next.

GLEANINGS.

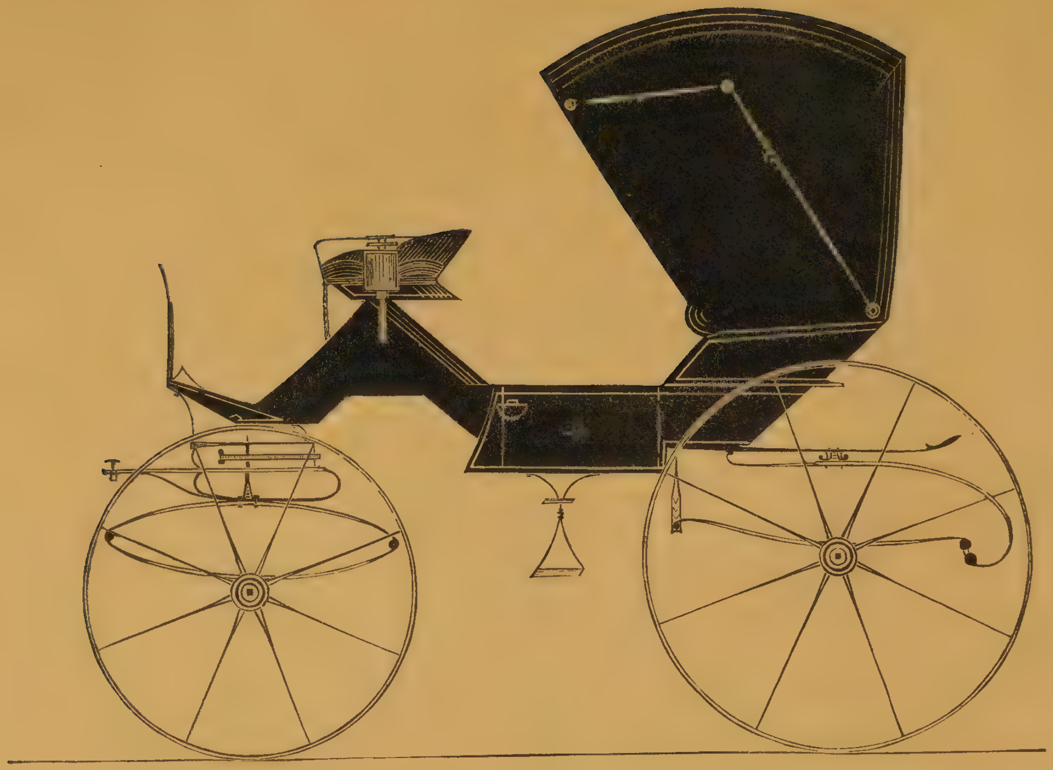
Heraldic devices and family coats of arms are growing in popularity. * * If there is any marked change in business, it is on the side of a better prospect for the spring opening. Some of our heavy builders are very busy, and unable to fill their orders as rapidly as customers desire. * * Orders for charts have been and continue lively. Our Business Charts are a great success. Orders for from 100 to 2000 give evidence that carriage-makers are alive to business. * * Emigration from Denmark to America has assumed gigantic proportions; not only the superabundant and useless part of the population now emigrate, but some of the most useful class of society, including valuable skilled laborers. The whole number of emigrants from Europe who landed in Canada last year was 53,281. Of these persons 36,899 passed southward to the United States, and 13,382 remained in Canada, of whom nearly half, or 6,172, had received free passes and provisions, and were bound to stay. The number of native Canadians who last year went south of the Lakes and the St. Lawrence, and exchanged the Union Jack for the Stars and Stripes, have been estimated by the Canadian papers at 80,000. 352,569 emigrants landed on our shores during last year. * * B. F. Morris, of Clinton, La., sent in two subscribers a short time ago; one of whom, Mr. Hayman, is a colored man, and a good blacksmith. Mr. M. says: "I make him a present of the JOURNAL. He can read a little, and two of his children can read very well. He has worked for me about ten years. I used to hire him from his mistress." * * Nine "fists" pointing down at an advertisement are calculated to attract attention. We suppose each one of the aforesaid "fists" are symbolic of those good right hands each grasping the hilt of a heavy sabre with which a flustificated individual "*wages an uncompromising war of extermination against humbugs in every form.*" * * In a late issue of Dick's Fashion Plates, there was somewhat of a novelty in the shape of a sleigh. The body is a shell phæton; it hangs very low, and is supported by scrolled irons. A footman's seat is placed on the scroll work behind. The goose-necks are very high, for what reason we do not understand. A Turkish emblem crowns the dash-board. The body is painted blue, striped gold; the running-part, red. * * Canada subscribers should be careful to pay charges through to Philadelphia when they remit money by express. Small amounts in the aggregate amount to considerable in the course of the year. * * Charles Ward, coach painter, at Geo. C. Miller & Sons' Factory, in Cincinnati, lately concluded that he would not attempt to brush through life any farther without a helpmeet, and accordingly took unto himself a wife. May unalloyed happiness ever attend them. Our readers will bear in mind this is not *Charles E. Ward*, formerly of Rahway, N. J., who, when last heard from, was peddling books, patent flat-irons, &c. Any information concerning *his* whereabouts will be gladly received at this office. * * Copper window sashes are now manufactured in England under patent. The metal used is drawn copper, and is hard and tough. The sashes, when completed, are subjected to a bronzing process, and are not affected by atmospheric influences. Coach-builders might find use for this metal. * * $9,500 was the result of one day's sales and orders lately at one of our uptown coach factories. Six coaches were ordered by one party. * * The old and well-known firm of Beckhaus & Algaier, of Philadelphia, has been dissolved; Mr. Algaier retiring. * * The firm of Bryant & Stulen, Towanda, Pa., was recently dissolved by mutual consent. * * 2500 sleighs were made at Westboro', Mass., in 1869. * * "The Hub" solicits good words from those interested in the success of a Coach-Makers' Convention. We are not informed as to the object of the Convention. * * Fairmount Park, Philadelphia, is to have a line of coaches the coming season. This is a move in the right direction. * * CO-OPERATION.—Stockdale & Bro., Ottawa, Ont., who have a good shop and machinery, but find it rather difficult to obtain good hands, stated in one of their letters to us, that they thought the co-operative plan would be the best for them to adopt, in order to secure skilled workmen who would remain with them. They report that there is a steady demand for all the work they can make. Here is an opening for a few who wish to better their condition. * * There has been good sleighing in the neighborhood of Milton, Ont.

HAND-MADE CARRIAGE BOLTS.

In the January number, under the caption "Philadelphia Carriage Bolts," we stated that the manufacture of carriage bolts had assumed large proportions in this city. There are eight or ten establishments in operation, giving employment to a host of boys and girls, who might otherwise be idle.

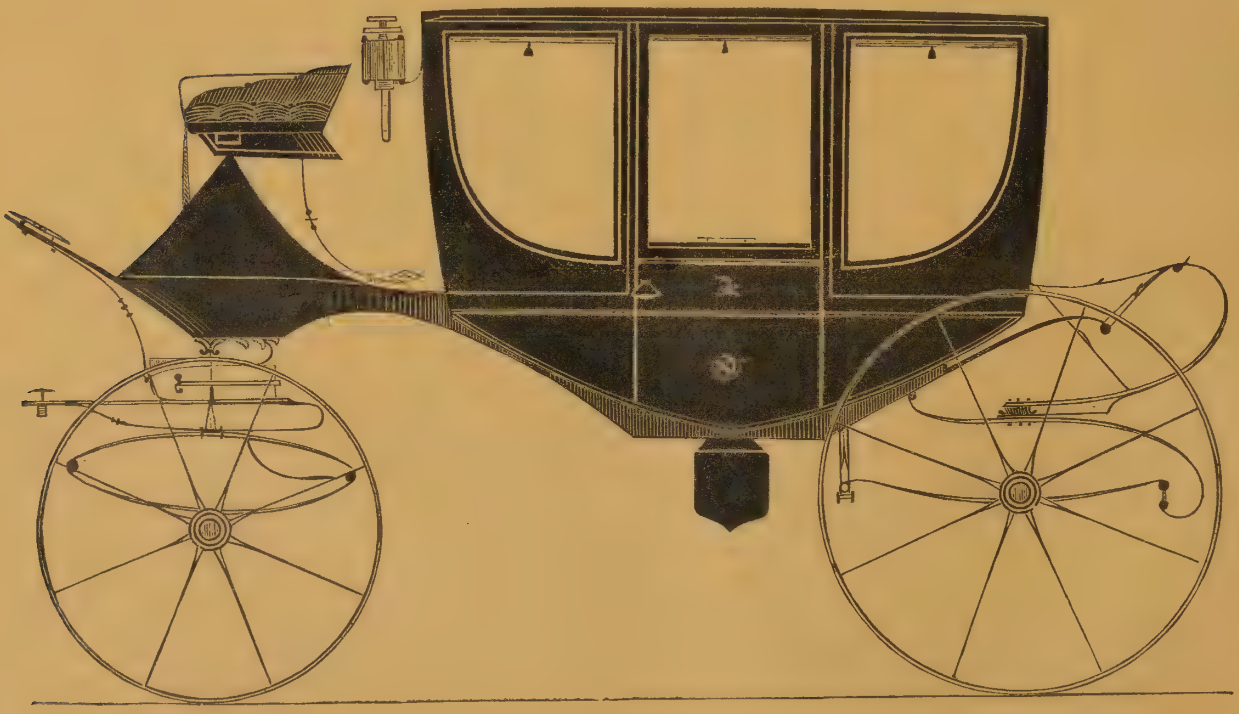
Having given an account of the origin of the Philadelphia bolts, we, in this article, will direct attention to one of the firms which has established a large trade by the uniform good quality of "hand-made bolts," namely, Mr. T. Skelly, Twenty-fourth street, below Callowhill, who served his time under the original manufacturers and introducers of the Philadelphia bolts. He brings to bear a thoroughly practical knowledge of the business; and devoting his whole time and judgment to their manufacture, claims to produce an article superior to those made by machinery.

Carriage and tire bolts of an inferior quality are damaging to the reputation of the carriage builder who aims to supply his customers with



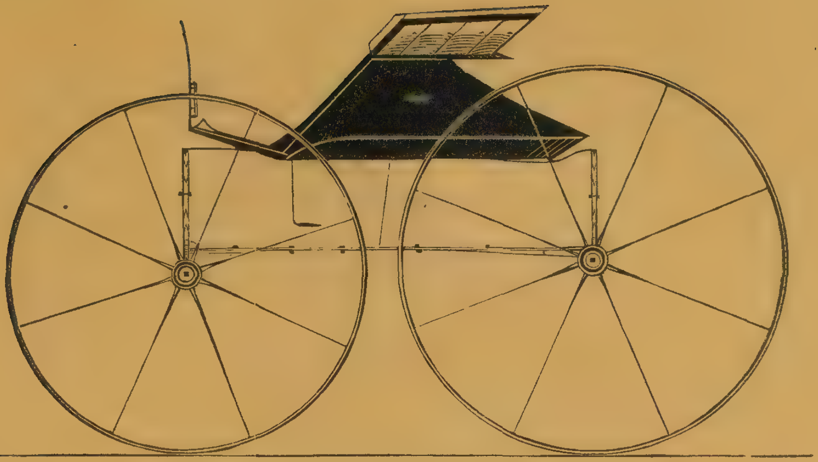
DE LESSEP'S PHÆTON.

Plate No. 22.—Half-inch Scale.—Explanation on Page 83.



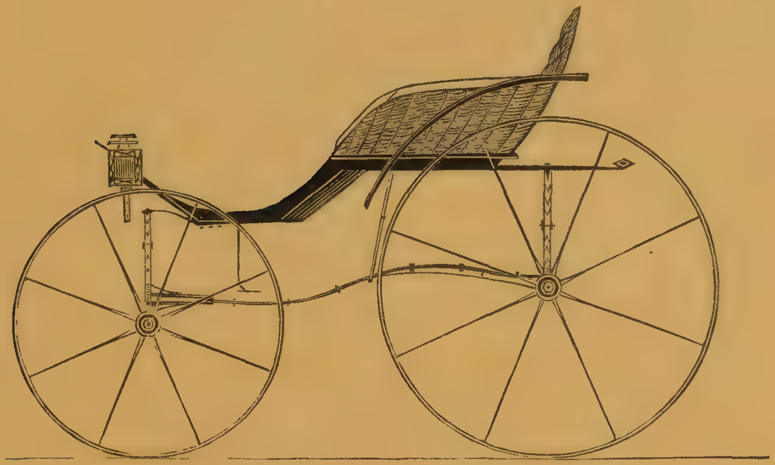
C SPRING TWELVE-QUARTER COACH.

Plate No. 23.—Half-inch Scale.—Explanation on Page 83.



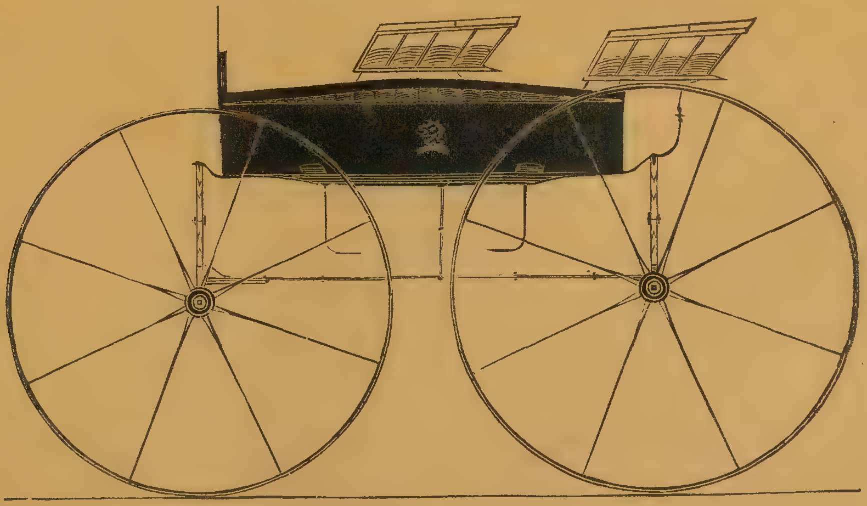
RICHWOOD BUGGY.

Plate No 24.—Half-inch Scale.—Explanation on Page 83.



BASKET PHÆTON.

Plate No. 25.—Half-inch Scale.—Explanation on Page 83.



WALTON BUGGY.

Plate No. 26.—Half-inch Scale.—Explanation on Page 84.

first-class work, and it is only by looking well into this matter, and testing those made by different firms, that he can decide which is the best.

Some prefer the hand-made bolts, while others are careless as to whether they be made by hand or otherwise. Mr. Skelly has continued to manufacture Philadelphia bolts in the old original way, (as he remarked to us,) "with a determination to keep up the character to the old standard," which strong competition had impaired and compelled the introduction of machinery. As Mr. Skelly is one of our old advertisers, we need do no more than mention his name, and call attention again to his advertisement, which appears regularly in the JOURNAL.

BUSINESS CHARTS, &c.

Orders for our small business chart have increased so rapidly during the last month, that we are obliged to ask the indulgence of those ordering. We are trying to be as prompt as possible, and hope our friends will not become impatient if their orders have to stand for a few days. We propose filling them in the order in which they are received, and shall try to keep them waiting no longer than a week or ten days, at most.

We are now preparing a *New Office Chart* similar to our last, but containing entirely different designs. It will be in size 24x30, and contain 28 or 30 carriage cuts, of late pattern, printed on lithograph plate paper, suitable for framing. The centre will be oval, blank, leaving ample room for business card. We purpose having this chart ready for mailing by the 10th of March, and orders will be attended to in the order in which they are received—first come, first served.

Price $1, post paid. This chart will be sent on a roller to prevent breaking.

Persons desiring a copy of our *present* chart will order at once, as we have but a few copies left, and there will be none others like them offered for sale. We do not believe in accumulating a large stock of old matter, and then offering it at half price.

Sent, post paid, for $1.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "FRENCH OR SQUARE RULE" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Vol IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted.

Fashion Plates Explained.

DE LESSEP'S PHÆTON.

PLATE NO. 22.—This vehicle, a four-seat phæton, which is intended for summer use, is produced principally by the use of right or straight lines. A child's seat may be added if required. We consider this a first-class design, in that it is well proportioned, plain and practical. As the body may be difficult of construction to some of our readers, we have given the cant, with dimensions and construction.

There are those, we are sorry to say, who object to the JOURNAL, because it gives them such full instructions. We have not time to stop and argue the point with them, but can assure all such persons that we cannot be moved from our purpose.

DIMENSIONS.—Hubs: 4⅜. Front band: 3⅛; back: 3⅝. Spokes: 1⅛. Tire: 1 by ¼ inch, steel. Axles: 1⅛, steel. Springs: 1½, 4 plates. Wheels: 3 feet 5 inches, and 4 feet 2 inches. Track: 4 feet 10 inches.

TRIMMING.—Gray cloth, patent leather welt and raisers.

PAINTING.—Body: panels, Magenta lake. Mouldings: striped gold ochre. Skirts of seats same color as the panels; the outer edge traced with fine line of gold ochre. Ornament in different tones of purple. Carriage-part: black, striped with triple lines of purple. Fronts of spokes, carving, and other intermediate points: touched up with gold ochre.

Mounting: gold.

C SPRING TWELVE-QUARTER COACH.

PLATE NO. 23.—This plate, as its name imports, is a twelve-quarter coach, for it is designed to be used spring, summer and winter. It has three separate quarters. Our engraving represents D lights in quarters for spring use. The glass should be French plate, beveled edge throughout. For summer use these are removed, and curtain frames inserted, to which the curtains are attached. For winter use, close quarters.

They are mitred at the corners, producing a perfect finish, and, at the same time, giving a different style of coach.

Each set of quarters is secured by two dowels at the top, and locked at the bottom. They pass under the drip moulding, and are thus effectually water-proof.

A coach constructed in this manner shows quite a display of skill on the part of the designer, and may be classed among the novelties.

DIMENSIONS.—Width of body: 53 inches over all; 4½ inches turn-under; deep chamfered mouldings. Carriage: 8½ by 5⅝. Front band: 4 inches; back band: 4½ inches. Spokes: 1⅜. Tire: 1⅜ by ⅜, steel. Axles: 1⅜. Springs: 1½, 6 plates. Wheels: 3 feet 8 inches, and 4 feet 2 inches. Wheels French pattern, the spokes being set on a line, the shoulders touching. Track: 5 feet.

PAINTING.—Body: panels, plum color. No striping on body. Carriage-part: plum color, striped; ⅜ broad line of black.

TRIMMING.—Blue reps.

Mounting: gold. Lamps: column pattern.

RICHWOOD BUGGY.

PLATE NO. 24.—This pattern has both the upper and lower panels slightly concave, with a light duster forming the front of seat; also, a bracket front. It has a slat seat. The seat rail to be covered with fair leather. This will make a beautiful body.

DIMENSIONS.—For half width on seat: 20 inches. Three-quarter seat: 26 inches, with round corner; the slats made ¼ by ⅜ of an inch; the outer surface worked in half diamond form to receive stripe. The side panels being concave, form an edge at their junction, doing away with a moulding. Hubs: 6½ by 3⅛. Front band: 2⅛; back band: 2½. Spokes: ¾. Tire: ¾ by ⅛, steel. Axles: ¾, steel. Springs, for half size: 1¼, 2 plates; three-quarter size: 1¼, 3 plates. Wheels: 3 feet 11 inches, and 4 feet 1 inch.

These dimensions are for very light work, and are not calculated for a rough section of country.

PAINTING.—Body: lower panels and seat skirt, light ultramarine blue. Carriage-part: Jonquil yellow, (white, lemon chrome and red.)

TRIMMING.—Small figured drab cassimere; patent leather welt.

BASKET PHÆTON.

PLATE NO. 25.—The basket phæton ever presents a light and graceful appearance. There is not that heaviness about them which painted panels present. The body may be painted in a light and cheerful color without appearing flashy, for the variation on the surface presents to the eye the light and shade of the color repeated throughout the several divisions of the basket work; and then the jaunty style of the whole, when on the road, with its fair occupants enjoying a drive, combine to keep this vehicle popular.

DIMENSIONS.—Body: width on seat, 36 in., with framed rockers paneled on outside; swelled panel under arch. Rocker plates: 1½ by ¼. Hubs: 3½ by 6 inches. Front band: 2⅜; back band: 2⅞. Spokes: ⅞. Tire: ⅞ by ⅛, steel. Axles: ¾, steel. Springs, back: 1¼, 4 plates;

front: 1¼, 3 plates. Wheels: 2 feet 9 inches, and 3 feet 6 inches. Track: 4 feet 10 inches. The wheels are to strike the perch.

The above dimensions are for a light phæton.

PAINTING.—Body: straw or cane color. Carriage-part: carmine, striped straw color and black. Cheerful colors should be used on this class of work.

TRIMMING.—Gray cloth.

WALTON BUGGY.

PLATE No. 26.—An entirely new design for a no-top buggy, which may be constructed with one or two seats; the hind seat to be attached as represented. It is supported at the back part by a scroll iron which is bolted to the seat, and by means of a thumb-screw secured to the projecting ends of the body loops. The ends of loops and feet of scroll irons are beveled to match, and are firmly held by the thumb-screws.

The upper line of body is curved. The small panel beneath follows this curve with the upper moulding; the lower moulding passing across the body straight, which gives to the inclosed space an entirely new and pretty effect. This space is to be painted imitation of basket work.

DIMENSIONS.—Hubs: 6 by 3¾. Front band: 2½; back band: 3⅛. Spokes: 15-16. Tire: ⅞ by ⅛, steel. Axles: ⅞, steel. Front spring: 1⅜, 3 plates; back spring: 1¼, 4 plates.

PAINTING.—Body: black, small panel, basket wórk in carmine. Carriage-part: carmine, striped black.

TRIMMING.—Wine-colored morocco.

Correspondence.

☞ We do not hold ourselves responsible for the views of our correspondents; but while we give a wide margin for the expression of opposite opinions, the language used must be respectful, and free from all personalities, and it will be our aim to guard the columns of the Journal against anything of a scurrilous or slanderous nature. Care should be taken by correspondents to send manuscript written in a plain hand, and on one side of the paper only. In all cases the real name of the writer must accompany each communication, but it will be withheld from publication when desired.

◆

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER IX.

"The sea. the sea, the open sea;
The blue, the fresh, the ever free;
Without a mark, without a bound,
It runneth the earth's wide region round;
It plays with clouds, it mocks the skies,
Or like a cradled creature lies."

This morning we received a visit from the native Harbor Master, who had an unpronounceable name, and a great deal of dignity; in fact, he appeared to think himself "some pumpkins;" but if he had a great deal of name and "dig," he had mighty little dry goods on him, for his outfit consisted merely of a *shirt* and a *Lamba scarf*, and a big gold snuff-box, which latter article was carried by a bearer, who had nothing but a shirt on him, and it very much curtailed; in fact, what Burns would have called a "cutty sark," and for all the use it was, as regards decency, he might as well have gone like Hans Breitzman's gal, "*wot didn't have nodings on.*" Of course, we poor "saltys" had not much chance to hear him talk, or get acquainted with him, and none of his servants could parley with us. A few of us got ashore next day, and had a good ramble off through the country for five or six hours, and I was gratified by a sight of the celebrated Traveler's Tree, of Madagascar—the greatest natural curiosity and most complete blessing of a bountiful Providence, who has arranged the productions of each quarter of our globe, both animal and vegetable, so as to be of greatest benefit to man in their different localities; and here, in a hot dry climate, where cool water is a luxury, and water-courses few and far between, we find a tree growing wild, in all parts of the island, which never fails to supply the traveler with a drink of delicious, cold and wholesome water. I had often heard of this, and had seen drawings of the tree, and I at once recognized it from the peculiar shape in which it grows. Imagine a common two-cent Palmetto fan, with a stem or handle say ten feet in length and six inches in diameter, then the spines or leaves all separated, and each leaf say eight to ten feet in length, and you have an idea of the traveler's tree.

One of the sailors, having remarked that it was pretty hot work this walking about, and he would like to have a drink, if he could get it, I said, "hold on, my hearty, I'll soon get you a drink." "Where," said he. "Here," I answered, "right out of this tree." So I cut a bamboo cane, and fastened my knife to the end of it, and giving him my rubber drinking cup, I showed him where to hold it, when I pierced the tree, and in a few minutes he had plenty to drink, and the rest had plenty to talk about, and I was set down as a "regular sea lawyer," for I'm blowed if you don't know something, Fred.

The water is procured by piercing any one of the spines or leaves, just where it joins the stem of the tree; those leaves are also used to roof and side up the native's houses, and the trunk is easily split up into tolerably smooth boards, then, as the style of architecture is simple, a house is cheap. The houses are made by driving four corner posts into the ground, then tying lateral strips or poles from corner to corner, and covering over all with leaves of the traveler's tree, tying them down in layers, one lapped over the other, and a four-post bedstead is made the same way, so it takes considerable less to build and furnish a house in Madagascar than it does in New York. Then the item of water pails is got over by cutting very thick bamboos, tying three together in a bunch with strips of bamboo, then cutting them all of a length, and they will hold water enough for a day. This article of bamboo, and its multitudinous uses among the natives of Eastern countries, will demand our attention in a future chapter of "My Cruise."

We met a great many people coming in to see our ship, and among them were some of the higher classes, distinguished by the number of their followers. Nearly every man we met had his snuff-box suspended from the neck; they take the snuff *on the tongue*, and it is a pungent, strong article, composed of tobacco, salt and herbs; so powerful that it would take the tears from the eyes of the hardest sinner, if he was not used to it. Some of those who had the inevitable snuff-box had actually nothing else on them; with this exception they were as naked as when they were born. Taken altogether they were a fine, well-made and intelligent-looking people, and some of the nobles, or hovas, as they are called, were really distinguished and noble-looking men. The common people are called the "betsimasaraka," whatever that means. But I learned the name; it was so easy to remember it.

From Madagascar to the Island of Mauritius is about 480 miles, and on the third day from Tomatave we sighted the hills just as day broke, and were soon at anchor in the harbor—the beautiful island made dear to us by the remembrance of our boyhood's delight in reading the sweet and romantic story of "Paul and Virginia," and I vowed to visit their reputed graves before I left the island. But I was a little disappointed in nearing the shores, for I did not smell the "tamarind and fragrant perfume" mentioned by Milton, who wrote—

"As when to those who sail beyond the Cape of Hope,
And now as past Mozambie,
Off at sea north-east winds blow
Tabean odors from the shore of Araby the blest,
With such delay well pleased they slack their course,
And many a league, cheered with the smell,
Old Ocean smiles."

The island was discovered by Don Pedro Mascarenhas, in 1507. He named it Cerne. It was captured by the British from the French in 1810, and is a valuable piece of British real estate, its production of sugar being simply immense, when the size of the island is taken into consideration. Four hundred ships are loaded in a year with sugar from an island which is only forty miles long by thirty-two wide from east to west. The population is extremely cosmopolitan; you may find Coolies and Chinese, Arabs and Englishmen, Parsee, Bengalee and Chinese merchant traders from Muscat or Bombay, Tranquebar, Pondicherry, Madras or Calcutta, Singapore or Canton, Yankees from Boston, and Johnny Bulls from London or Liverpool, and sailors from everywhere else. The military are English, but the police are mostly East Indians, with white robes, turbans and blue sashes.

Almost every one here appears to speak French, and it retains its Frenchy appearance in everything. But the red-coated soldiers occasionally met with reminds us that, "Britannia rules the waves," and that we are gradually being convinced of the truth that, "the sun never sets on the British empire." But the people and their method of doing business is of *La Belle France*. The shops are very flashily fitted up, especially the drug stores; they will almost rival Yankee land in this line. The stores kept by the negroes are some of them comical in the extreme, for they have struck the original idea of naming their stores like the English name their taverns; for instance, over a tailor's shop was the sign "*A Pauvre Diable*," (a poor devil.) A cobbler had "*A Bon Diable*." A butcher named his shebang "*A la Grace de Dieu*," (by the grace of God.) These signs took a good deal of our attention, while the Malabar native barbers were a constant source of fun to us, as we stood watching them operating on the heads of their customers in the street, under a mat stretched on poles. The customer squatted on the ground, while the Knight of the Razor continued his work with the greatest gravity, heedless of the fun we poked at them. As soon as they got done with a customer they shouldered their outfit and went to look up another one.

[TO BE CONTINUED.]

"TALK about crocodiles weeping," said an old salt, "why, blast my eyes, haven't I seen whale's blubber."

For the Coach-Makers' International Journal.

OVALS AND SPIRALS.

BY J. H. T.

It is not my intention in this article to use geometrical lines and plans for making the oval and spiral, that being a double labor, and there being but a few who would give themselves the trouble of following the directions, so I will give them the simplest mode of making them.

An oval is formed divers ways, in all which the figure is either a compound of several portions of circles, or it is one line drawn from two centres. The most usual methods are these: first, describe a circle and draw two diameters in it, as *a, b, c, d, Fig.* 1; then, from the points *a, b*, draw two other circles equal with the first; then from the point *d*, draw a line through the centre of the last circle to the circumference *e*. When you have done this, set one foot of the compasses in *d*, and with the other take the interval *e* and describe the arch *e, f*, and doing the like on the other side, the oval will be formed.

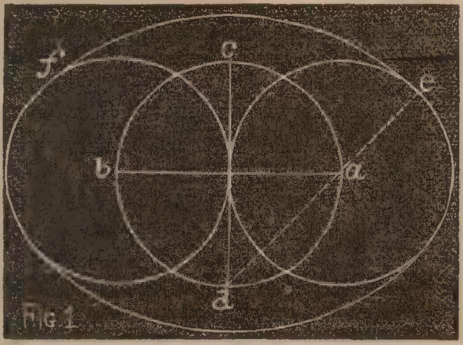


FIG. 1.

For a rounder oval, draw a single line, and from *a, Fig.* 2, as a centre, describe a circle, the intersection of which, with the right line in the point *b*, will be the centre of another circle; then, to form the oval, take in the compasses the whole diameter of one of the circles, as from *a* to *f*, and in one of the intersections of the circles, as *d*, setting one foot of the compasses, with the other draw the arch *g, h;* do the like from the point *e*.

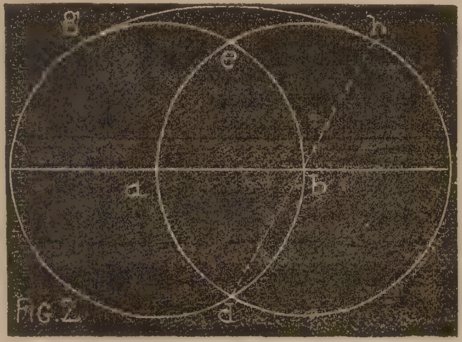


FIG. 2.

There is also an easier and more useful manner of describing ovals than the preceding ones, the same rule serving for all forms, long, narrow, broad and short, &c.

Draw a line the length of the oval desired, *A, B, Fig.* 3, to serve as a centre; divide the same into eight equal parts, then set two pins, one at each space from both ends of the desired oval; draw a string, "one that will not stretch," from around one pin and extending beyond the other pin to the extreme end of the oval, tying it securely; then place the pencil on the inside of the string, pressing well against it so that it will not slip off; turn it until you arrive where you began, as you will see in *Fig.* 3, *a, b, c*. This will give you a perfect oval. If you would have the oval longer, divide it into more spaces so as to set the centres further apart; and if a short one, do the contrary.

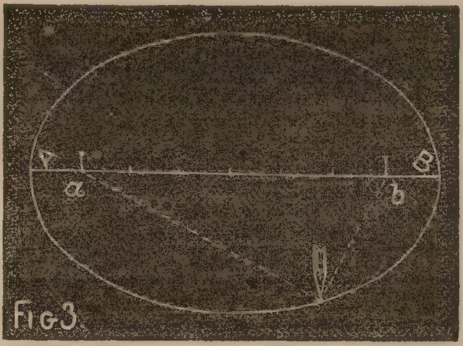


FIG. 3.

Or thus, as in *Fig.* 4, draw the lines *a, b* and *c, d*, at right angles to each other, cutting each other at *e;* then mark the length and breadth of your oval, and take the distance *e, b*, and set it off from *c* and *a, b*. These are the points at which the string is to be secured; then draw the string with the point of you pencil till it reaches *c* and *d*, and describe your oval.

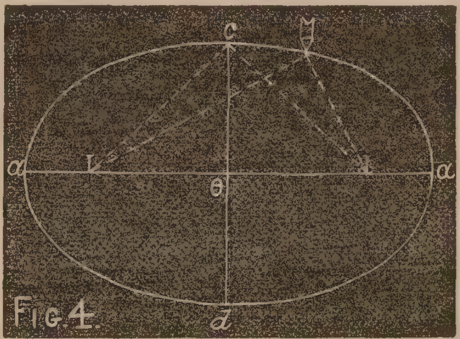


FIG. 4.

Fig. 5 is the manner of drawing a spiral. First, draw your perpendicular line *e* across the board you wish to use, then take one-fourth of the space you wish to give, and prick it off to the right hand side of line *e;* then form a square, one side of which must be the size of this one-fourth of the given space—the square is *a, b, c, d*. You can now draw your other lines, as *f, g* and *h;* then begin to draw the different circles with your compasses by placing one point of your compasses on *b* and *d*, with the other extended until it reaches *c* on the line *f*, you can draw from *c* to the line *h*. You must now move your compasses from point *b* to *a*, and with the other extended on line *h* until it reaches the point of the circle you first described; then draw you circle with this radius from line *h* to line *e;* then move your compasses from *a* to *d*, and with it extended until it reaches the part of the circle already drawn on line *e*. Draw from line *e* to line *g*, then move your compasses from *d* to *c*, and with the radius enlarged until you reach the circle just left on line *g*, change from line *g* to line *f;* then shift your compasses again from *c* to *b*, and keep on in the same way, shifting your points of compasses and describing parts of circles, until you have got the size of the spiral you desire.

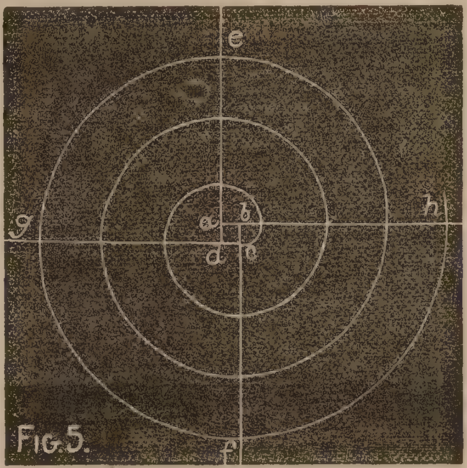


FIG. 5.

An easier way to make a spiral, or volute, is made in the following manner: Take two points in a line *a, b, Fig.* 6, the points to serve one after another as centres; as, for instance, having drawn the semicircle *a, b*, set one foot of the compasses in *b*, and open the other to the length *a, b*, and describe a semicircle *a, c;* then set one foot in *a*, take the interval *a, c*, and draw the semicircle *c, d;* continue this as long as you please, still shifting centres.

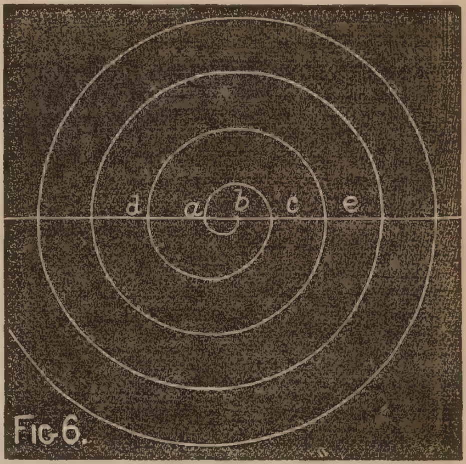


FIG. 6.

PENCIL RULE & SQUARE

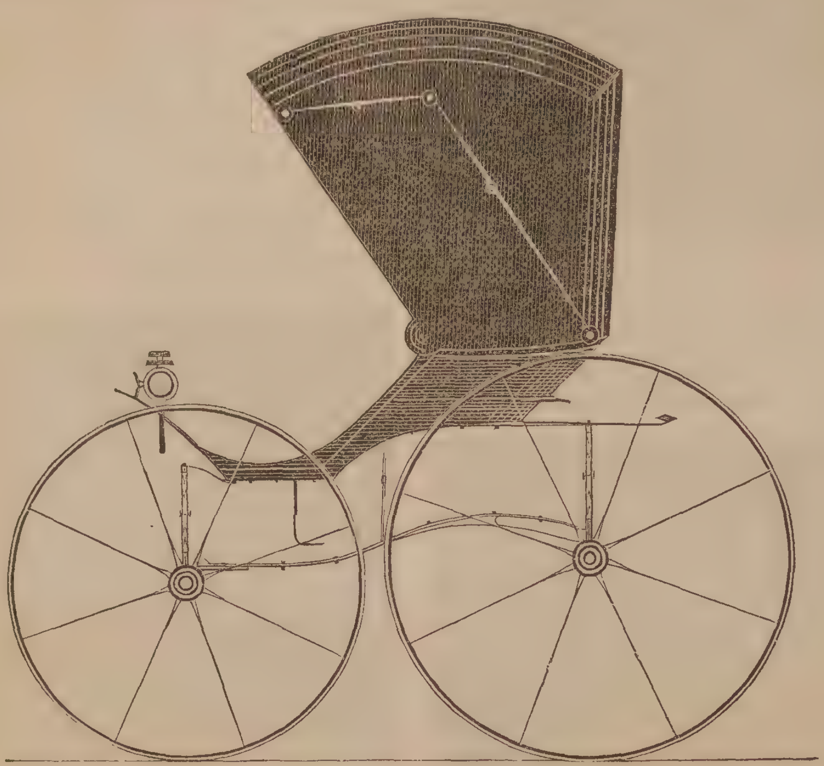
D. BOARD EDITOR.

SCALE DRAFTING.

Continued from page 71.

As we previously stated in No. 2, of this volume, under the head of "Scale Drafting," an India ink draft, when properly shaded, will resemble a steel plate engraving. While the method of applying the ink is necessarily similar in every style of carriage sought to be represented, the student will discover that more skill is required to produce a clean and well-executed drawing on the outlines of a buggy, like the one here shown, than on the straight, plain design given in the November number.

It will be discovered by the beginner that he must use more dexterity in handling the sable hair pencils, and there will be many failures before the hand will become trained to its work in giving those delicate touches which the experienced draftsman appears to perform without an effort. Practice alone will give that confidence which is requisite in making the drawing pen, or the inking pencils, obey the will. Nervousness, which is always experienced by the novice, will wear away gradually, and, after a time, what seemed to be a vexatious task, will be the source of much pleasure.



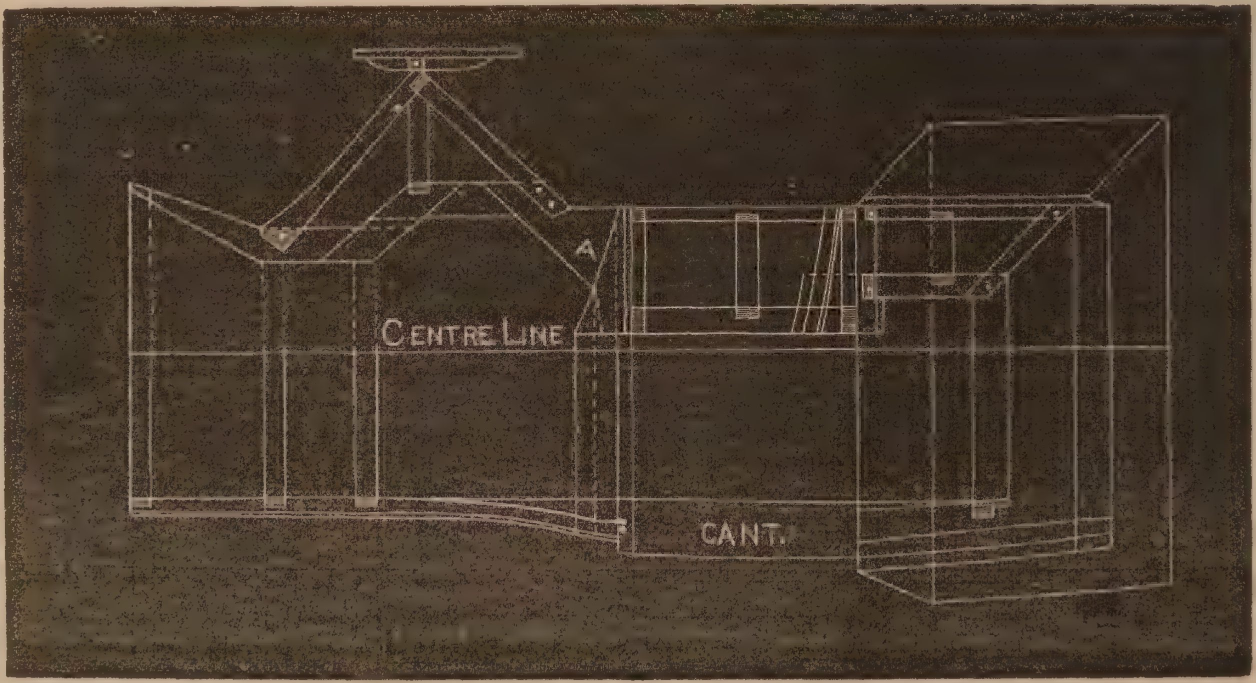
The starting points in this draft, as in all others, will be to strike the rims of the wheels; next the tire line, which is the outside line that bounds the wheel; then follow with the hubs, circle of the top, prop nuts, knuckle of joints; last, the lamp.

We now refer you to the sweep patterns given in the February number, which were used in defining the pencil sketch.

The "arch" sweep, *Fig.* 1, may now be applied to the draft, using so much of it as is contained between the figures 1 and 2, using the pen instead of the pencil, as in the first instance. The remaining patterns are to be applied in the same manner, the only difference being to make sure work with the pen, for when ink becomes set in the grain of the paper it cannot be erased. In drawings of this kind, it is necessary, in some instances, to change your pattern, and piece the line. Here is a nice operation to perform, for the contact of the lines, where joined together, must not be perceptible. Practice alone, which gives a perfect control of the pen, will accomplish it. Another point to which we would direct the attention is, that where lines intersect, care should be taken to have them of the same size, also to avoid the defect of one line over-reaching the other. It is preferable to run on a line starting from the end of the one already drawn, rather than to begin at a distant point on the pattern, and conclude the line at the intersecting point.

Having completed the inking of the lines laid down, erase all pencil marks, and then proceed with the shading, as explained on page 23 of this volume. The draft now under consideration being a close-top buggy, it will require more skill to produce than the previous one, which was a roll-up-top. The larger the surface over which a tint is to be laid, the more difficult it will be found to lay on an even coating of ink, and graduate the shades so as to represent the roundness and receding portions. The joints must be white. To do this, the paper will be left clear throughout their outline, the ink to be worked up to the joints, forming them clean and sharp.

Lighting and shading is governed by the following principles. When light falls upon any object, it (the light) is reflected to a greater or less degree, according to the form of the object. A level surface would reflect light throughout its plane, with but a slight modification. But a globe, cylinder, or a rounded surface, as the top or back corner of this buggy, would appear lighter at the highest points; and as the planes



recede, they would gradually fall into shade. Any portion of a draft, then, which you wish to bring forward, must be represented lighter than those parts which are retiring.

CANT OF DE LESSEP'S PHÆTON.

PART THIRTEENTH.

BY A PRACTICAL CARRIAGE ARCHITECT.

We insert the working draft of this phæton, showing the manner of framing the body.

Having given in former numbers a minute description of the main lines here laid down, we deem it useless to repeat. By reference to the December number, the reader will be put in possession of all that is required, with the exception of the neck piece *A*. This piece is framed into the front pillar, forming a slight concave to the front, which is 28 inches wide, as laid down in the "cant."

Width of body at top of door, 36 inches, with 2 inches turn-under. Panels of back quarter are placed in a groove, with square mitred corner, and moulded as shown in the Fashion Plate. Seat mitred same as body. Bows 46 inches wide.

As it is impossible to represent in the Fashion Plates the proper swell and variations of lines which bodies of this kind possess, when viewed as a complete vehicle, and as our descriptions must ever fall far short of giving a just idea of them, the taste of the workman should be sufficient to supply the remainder.

Mr. Editor:—I would like to ask D. Board if, in building a nice light body of the coal-box style, he used screws and plugs, or if he depended entirely upon the glue to keep the side panels to their place. If he will answer this in the Journal, I would be much obliged.

A Subscriber.

Answer.—It is our practice of late years to omit the use of screws; but unless the panels are properly put on, and certain other conditions adhered to, which are noticed in what follows, it were better to cling to the old method.

First. It requires thoroughly seasoned wood.

Second. In preparing for gluing, rasp the frame work and panels, forming a wooly surface. Warm the parts to be united, and apply a sufficient quantity of the best glue, properly prepared, to fill up the grain of the wood, and hold the parts firmly together. The panels should be griped up with iron clamps, of which the shop should be well supplied, as a great many are needed for work done in this manner.

Third. Much depends on the painting, both inside and out; for if the wood is not protected from dampness, the panels must give way.

As a first quality of glue is requisite, we will conclude by adding our test. We take two pieces of wood, say ash and poplar, and glue them together; and if, when dry, the joint gives way under the chisel and mallet, we pronounce it unfit for use. It must chip out into the solid wood before giving way where glued together. This is a severe test, yet we practice it, and are amply repaid for our care in the stability of the work.

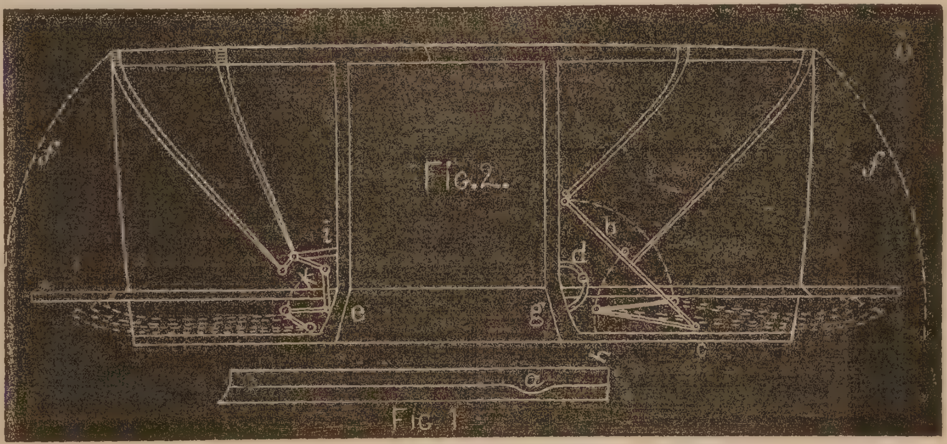
HAMMER SLEDGE & ANVIL

V.ULCAN EDITOR

A NEW MODE OF IRONING OFF A LANDAU TOP.

Our last January No. brought us a very elaborate style of a Landau top, such a one, in fact, as would challenge criticism; yet, as everybody claims to have a right to enjoy the pleasure of his own opinion, it might not be amiss to follow with another plan of drawing in the bows, which, in this instance, are made after a more straight pattern.

Instead of closing the joint in the top of the door by means of dowels, an angular piece, *a*, *Fig.* 1, at either end of the joint, fitted tight into a corresponding cavity, shuts the joint like a wedge, and, we think, imparts more firmness, on account of the larger surface brought in to steady the lateral motion, and affording a more effective resistance against the wear or looseness of that part of the top; reasons which are of import for the keeping of the graceful outline of the top.



Let us turn our attention next to *Fig.* 2, where we have delineated a top in two positions—one up and one let down—and we will notice a contrivance to substitute the so-called finger irons, which consists of small joint *b*, for the back quarter. It has been quite in favor for some time, and will help to complete our stock of knowledge, which we are striving to present to our readers. First, the top, when raised, has the second bow hinged to heavy or inside bow, which brings the first mentioned bow into the proper place when let down, as shown by dotted lines representing the top when lowered. Short joint *c*, either up or down, shows the manner in which the third bow is drawn in, almost touching the inside of door pillow, and placing the top, when lowered, in a well proportioned position. The dotted circular lines around pivot *c* and *g* illustrate the turning of the joint. Concealed hinge *d*, moving in a groove cut in the door pillar, is placed outside of the short joint, and thereby keeps the latter off the covering of the top. This hinge is stationary at *g*, with a good bearing in the rollers, and screwed to the door pillar by a plate as wide as the pillar affords. The bows are made of three pieces; the top or cross piece has a tenon fitted into a slit in the upright pieces, secured by a corner iron screwed to the inside of the bow.

The mechanism of the front quarter differs materially from that for the back quarter; and although there is an idea of a finger iron, it is by the help of sharp angles and combined action of pivots, more effective in shortening the top when let down. We point out first bearing plate *i*, screwed to door pillar in a similar way as concealed hinge *d*; this plate draws finger iron *e* right over when turned down, and brings the outside bow back against the door pillar. This is no doubt valuable, as it helps the dickey seat to come up closer to the body, which enables the builder to construct his body in good proportion.

Now let us follow the dotted circular lines, delineating the action of the combined levers, three in number, and we find that when part *e* attains a horizontal position—shown by dotted line *k*—it has reached to the top of plate *i*; it draws in just as much as if you would move the top of rod *e* up to the top line of bar *i*, when in a standing position, and the end of finger iron revolving on rod *e* will be exactly that distance nearer the door pillar. Dotted lines *f f* indicate the spot where the bows would fall, if moving on a common finger iron. The top joints are left out, so as not to interfere with the already numerous lines of the diagram.

☞See Colgate & Co.'s Advertisement.

HOOPING WHEELS.

(*Continued from page* 73.)

In addition to the article I gave in No. 4, in regard to wheels, I will say, that in making them, the spokes should be fitted and driven so that the bottom end of tenon should receive the most of the squeeze, and at the shoulder should fill the mortise perfectly tight. They should not be driven so hard as to overtask or mash the grain of the timber. The same principle will hold good in setting the tire. If set too tight, it is apt to make the felloe bilge or wrinkle each side against the spoke, and the consequence is it will soon split at the spoke.

Sometimes we see new wheels, before the tire is put on, with a bilge in the felloe each side against the spoke. This is caused by the felloes not being properly seasoned. Such wheels are in bad condition for the tires, and will not stand as much draft without wrinkling. In no case should the grain of the timber be overtasked. In putting up a carriage, if a small thing as a bolt-head should be screwed so tight as to indent or mash the timber, it would be a detriment to its durability. Banding hubs should be governed by the same principle. If driven too tight will they not only mash the timber, but will flare or widen the band at one edge; thus the band will be more liable to slip off, and the hub will be just as liable to shrink and loosen the band. They should be driven on when just warm enough, so as not to burn the hub, and only just firmly tight. Felloe bands should never be used, especially if you want a durable wheel. The band adds no strength to the joint of felloe, but weakens it in every sense of the word. Use the felloe clip.

For twenty years I have watched the causes and effects in the failure of wheels, both in the wood and in the ironing. Again, if the tire is set too tight, the felloes will always be working out from under the tires. The shrinking and the swelling of the rim also helps to produce the same result. The road they run on will make some difference, but not as much as many people imagine. For instance, the railroad track. To illustrate a little, we will take a hammer and try to knock the tire from the wheel by striking it on the edge. The result will be a failure. To give it a fair trial, suppose we rap the felloe; the result will be that we shall drive the felloe out from the tire. If this is true, the same principle will hold good when the tire strikes the railroad track. The difficulty is, the wheels are allowed to run too long after the tires become loosened, and need resetting. Many hold that running on pavements will cause the rim to protrude from the tires; but, in my opinion, it is a mistaken idea.

To illustrate again. After the tire is set on a new wheel, take a hammer and strike the tire on the tread when the wheel is standing on a brick floor, (or I don't care if it stands on the ground,) the felloe will protrude from the tire; but you may take the wheel in your hands and strike it down on the ground, stone floor or anvil as long as you please, and as long as the tire is tight it remains immovable, showing the manner in which they are attached to the carriage, and the running does not materially tend to run the tire off. All natural in the construction for durability if properly put together.

Then you ask, perhaps, what is the cause of the wheel working out from the tire on pavements more than other roads? I will give you a few reasons. First, perhaps, they are run more. Second, they are kept dryer; they are not so thoroughly soaked in mud and water as on common roads. Third, they are not so much exposed to the wet. The sun is all the time shrinking the felloe, and, at the same time, the tire is expanding. Thus, between the two opposites, the tires become loose, and the felloe is naturally forced from the tire. H. D. F.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 75.)

Having, in the previous number, overlooked the cause of varnish clouding or smoking over, we will here give attention to it.

Rubbing or leveling varnishes, and the best quality of finishing varnish, each present this appearance at times. In answer to a question we asked an old experienced varnish maker, some years ago, he replied, "that there were some qualities of gum that would invariably cloud when spread on a surface, and that it was an evidence of inferiority in the gum." We will not deny the statement, but our observations in this direction do not bear out its truthfulness.

Finished work clouds over while standing in the wareroom or repository, because it is kept from sunlight and air, and is more or less exposed to the sulphurous vapors from coal smoke. Harland & Sons' finishing varnish clouds over much quicker than Noble & Hoar's when subjected to the fumes of bituminous coal, or even under more favorable circumstances.

Exposure to sun, and frequent washings, will restore the gloss in a great measure; but when a carriage has stood for several months, the better plan is to re-varnish it.

Having, in previous numbers, spoken of the tools and appliances used in the paint room, of colors, oil, varnishes and japans, we will take up a coach and carry it through from the priming to the finishing coat of varnish. We select a coach, for the simple reason that it will cover all lesser styles of work. The bottom, top and inside painting or slushing is generally done in the wood shop, so that when the body arrives in the paint room, those parts are one coat in advance of the remaining surface.

As the top and inside of the panels require more attention than some manufacturers give to them, it will not be out of place to mention them in passing.

The painter cannot be held responsible for green timber in a top, which causes the covering to rise up in ridges or blisters, nor for carelessness on the part of those who draw on the muslin, in not rubbing it down to prevent air from getting under it; but he should feel sufficient interest in his work to see that the inside of the top shall have a good, heavy coating of slush or oil lead, to preserve the wood from dampness, and on the outside of the top that it is properly primed—not with dirty or skinny paint, but clean, smooth lead. When this is dry the nail holes and low places should be puttied with a firm drying putty, which will bear blocking down with sandpaper, leaving the top as level as possible. When this is dusted off clean, apply a heavy coating of smooth lead in oil, with sufficient varnish in it to hold the lead together, so that when the muslin is drawn on it may be rubbed down, and, as it were, bedded into the paint. The roof will then be perfectly air-tight, and in good condition for filling in. If, on the other hand, the muslin is drawn on over a rough, uneven coating, the highest points will be rubbed through before the surrounding surface is brought down level; the water gets under, and puttying will not prevent the cloth from raising up after the coach is exposed to the weather.

The inside of the body should be well coated, which is a great protection to the panels, especially in the process of rubbing out the rough stuff. The priming coat should be mixed of the best pure keg lead and oil, with only a small quantity of dryer, and allowed at least one week in which to dry. This first coating is a very important one. It should be thin; we do not mean that the paint should be very thin, but that the lead should be well worked into the nail holes and grain of the wood, leaving only a thin film on the outside. A well-worn, springy brush is the best. When this coating is dry, sandpaper it carefully, and apply the second coat of lead, using less oil. The third day thereafter putty the nail holes half full. The second day after puttying apply the third coat of lead, mixing to dry firmly, using no oil except what the keg lead furnishes. When dry finish puttying the nail holes, and plaster up the grain that may be very open, leaving no putty on the outside; or, rub into the grain lead mixed up heavy.

The body has received three coats of lead, and is puttied. It may now stand two, three or five days, as time will permit. When again taken in hand, sandpaper off any putty that may be above the level of the surface; dust off, and brush on a level coat of lead, which must also dry hard and firm. Each coat of lead should be laid on as level as possible, and be made to do its share of filling the grain. The roof should not be slighted, but the bottom and inside of doors may have one coat less. The body may now be set aside for three or four days, when it will be ready for the rough stuff.

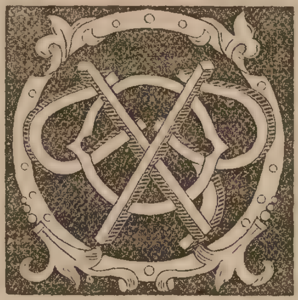
The rough coatings should dry very firmly, possessing only sufficient elasticity to bind them to the surface. The first coat will bear a trifle more oil than the remaining three or four, and should stand about four days; the other coats can be put on every second day. Four coats and a guide coat should fill up well. The foundation coats fill better by being laid on crosswise alternately.

If English filling is used, mix one part of keg or oil lead and four parts English filling; mix up stiff in a good brown japan and raw oil. The oil should be in the proportion of one-fourth to three-fourths japan. Varnish may be added or not, as the painter may think best. We have serious doubts as to its adding any to the good qualities of rough stuff. It tends to hold the particles of paint closer together, and probably makes the rough stuff rub tougher. But it cannot be doubted that varnish is more liable to crack when exposed to the weather than oil, and to whatever extent varnish is added to paints, to that extent is it more liable to crack. But, the common practice is, to add varnish to rough stuff, some painters holding that American and others that English varnish is the best. In this country, where painting is done (by steam,) we were about to say, it cannot be expected that it will wear any great length of time.

In the use of the "Permanent Wood Filling," which is now used by many large manufacturers, the lead coatings, (according to the "Hub" method,) are omitted; but the remaining operation is about the same as given above. One point cannot be dodged, which is, the grain or pores of the wood *must* be completely filled, whatever method is adopted, and *that* filling, whatever it be, should hold down the grain, and not allow the varnish coats to be absorbed.

Monogram P O R, (*enclosed in an ornamented garter.*)—These letters are represented in the plain block form, and may serve as a useful lesson to the student in producing the effect of one piece or more being united through mortises. This pattern, being very simple in form, will be readily understood.

"P" is reversed, but this is allowable in drawing monograms. "P" and "R" show the size of the pieces; the top ends giving the full size. The letter "O" passes through both "P and R," thus uniting the three letters.

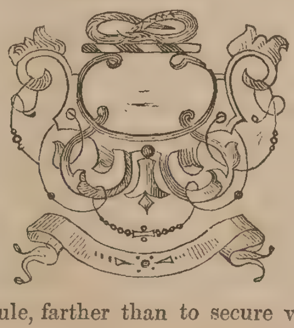


These patterns may be varied to a considerable extent, and contain a principle of great value to the ornamenter and striper. Were these letters made of glass, and joined as here shown, it is evident that the full size of each piece would be clearly seen, and the lines which define the edges of each letter would be apparent throughout their extent, and would not be broken, or rather hidden where they intersect; proving that when the painter wishes to represent any object that is opaque, those parts that cross any other part must cover up the outline according to its size, or be hidden in passing through. Thus, "P" and "R" in crossing each other, one will cover up the outlines of the other, according to its dimensions. Those parts of the letter "O" which appear as if passing through "P and R," must be covered to the width of "P and R." In chain, or linked striping and scroll work, the successful ornamenter must possess a lively imagination in combining, and skill in executing work of this character.

Although the representations of leafing and vines passing through each other is unnatural, still, it is a license given the painter, as the effect produced is pleasing.

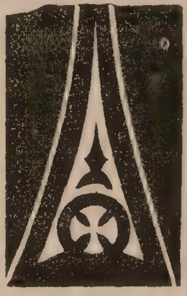
In laying in this monogram, the letters may be coated without reference to those lines which intersect; the lines to be brought out afterward by light and shade; the monogram in colors, and the surrounding border in gold, or *vice versa.* The upper third part of the letters, orange; the next, vermilion; the bottom, Indian red, enriched with a small portion of lake or carmine. Each color should be laid on, and the connecting edges be blended together. The high light, straw color; but this must not be carried on to the vermilion or Indian red.

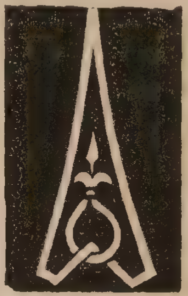
Three tints of blue, brown, &c., may be used, each giving an acceptable appearance.



Ornament.—This is drawn by using an oval as the foundation or first lines; the after details are merely imaginary, and cannot be laid down by any rule, farther than to secure variety of form and graceful curves. This will make a very neat ornament. We prefer gold leaf for these small ornaments, with the introduction of color only on the crest and cord.

Having shaded the ornament, wash over those portions to be colored with any transparent color that fancy may dictate—verdigris, carmine, lake and asphaltum are most commonly used. Colors that are less transparent may be employed, but they cover up too much to admit of the gold showing through the superimposed coating.





Spoke Face.—The accompanying cuts show two designs for front of spokes, either of which may be easily executed.

Baltimore, Md.

Mr. Editor:—If convenient, please answer the following questions:

1st. Which is the best way of mixing striping so as to run a fine line the full length of spoke?

2d. Is there any remedy to prevent fine line pencils from curling?

3d. Is there any particular way of mixing light striping, such as white and straw color, so as to make the whole look of one uniform shade; or, in other words, to have one place light because the color is a little heavy, and another place dark because the color is thin?

4th. Should Noble & Hoare's English Varnish be kept air-tight or not, and should it be kept in a warm room or a cool place?

J. T. C.

Answer First.—Raw oil and sugar of lead work the most kindly, especially when the stripe is run from the hub to the felloe, for the color dries slowly, and admits of the ends of the stripes being blended together at the lap.

Purchase sugar of lead in tubes, ready ground, English varnish two parts, and rubbing varnish one part, slightly thinned with turpentine, well shaken, and allowed to settle for two or three days, produce a good vehicle for fine lining. For lakes, which dry slowly, add a small quantity of japan. Use the best sable hair pencils; the long ones carry the most color, and of course will run on the longest stripe. If your color is mixed to dry slowly, the long pencils should be used; if it is mixed *quick*, short pencils work best. Colors possessing a good body, or covering power, may be used much thinner than those of an opposite quality, which aids the painter in running on fine lines. Yellow, orange, vermilion, Indian red and lampblack are among those which cover well, while white, lake, carmine, ultramarine blue, &c., are more or less troublesome. Those last named should have a small quantity of varnish added to hold the particles together. The turpentine used for thinning should also have varnish in it sufficient to prevent its cutting the color; or, in other words, separating the particles, and thus destroying its covering power. Always grind your colors in a small pan, and thin down *about* as thin as it will bear; the stripes will then be more uniform in size.

ANSWER SECOND.—When a pencil curls, draw it gently over a piece of warm iron, which has been greased. Pencils are induced to curl by the manner in which they are treated. The practice of pulling the hair through the fingers, in cleaning them, or in applying hard grease, stretches the hair, and causes it to curl. Beef tallow tried out, and sweet oil added to it while hot, will keep soft through the coldest weather, and assist in preserving the pencils in good shape. We take it for granted that the pencils are always laid out straight.

ANSWER THIRD.—In mixing white for striping, use French zinc, cremnitz, or china white, as they possess more body than white lead. If the white line is to be run on a dark groundwork, add a small quantity of lampblack to the white, making it a silver color. Lampblack gives the white more body, and is not detected by the eye. The stripes will also appear of the same shade throughout. A white line when run on a bright color would not bear the lampblack, as the contrast would not be great enough to hide the silver colored tint. Chrome green or ultramarine blue would answer better.

Straw color, for striping, is certainly a delicate color to handle. As the principal ingredient is white, it is of the first importance to use the best. (See above.) The yellow should be the best lemon chrome. A small portion of vermilion or Indian red will give it more body and not be detected. To prevent the appearance of light and dark portions, the color must be used heavy enough to cover well. The pencil must be filled with the same quantity of color each time, and when the stripe begins to appear thin, run over it again with the pencil only partly filled. By this means a thin layer of color is added to that which is already on; the two coats being equal to one put on with a full pencil.

A *broad* line of straw color requires two coats to produce a perfect finish. The above colors may be mixed in varnish, or oil and sugar of lead.

ANSWER FOURTH.—The varnish should be kept air-tight, but the cork be removed an hour or so before varnishing, or the varnish poured out in the cup a half hour before using it. During the winter, the varnish should be kept in a warm room, as it tends to thicken up and work heavy. The practice, however, of heating it repeatedly at the stove is, we think, injurious. During the summer, a cool place is the most desirable. But these nice distinctions do not amount to much, for the heat of the varnish room will act on the varnish very quickly. The varnish room is the proper place for finishing varnish. It should be kept in a close cupboard or box, and carefully handled when in use.

LIBERTYTOWN, MD.

MR. EDITOR:—Please answer me through the columns of the JOURNAL how to prevent the hair from coming out of striping pencils while using them, and how to mix filling without using japan. J. L. M.

ANSWER FIRST.—Pencils, by constant use, are like everything else, liable to wear out and become worthless. A well-made pencil, however, should not give off the hairs after having been used two or three times. At first there will be a few loose hairs, which is nothing unusual. Pencils are often spoiled in greasing them, preparatory to laying them away, by using hard grease, which must be pulled on the pencil between the thumb and finger. This stretches the hairs, also loosens them, and when put into service they pull out. A drop or two of glue, or shellac varnish, put into the quill, will cement the hairs together, and prevent them from drawing out.

QUESTION SECOND.—Take one part each of red lead and umber to three parts white lead and ten of ochre. Mix stiff in oil or rubbing varnish, thin with turpentine. Red lead, verdigris, umber, sugar of lead and litharge are all good dryers, and either of them will hasten the drying of oil.

NEWVILLE, PA.

MR. EDITOR:—Will you be kind enough to give me through the columns of the JOURNAL a receipt for making and applying slating on pine or poplar boards? I would like to make a draft board that I can mark on with a slate pencil if it is possible to make it work? Please give me also a good receipt for making putty for all kinds of work. A SUBSCRIBER.

ANSWER FIRST.—We have no receipt for making and applying slating. We can furnish you with an article, called "Pearce's Slate Surface," which is put up in quart bottles, two coats of which applied to a surface produces a perfect slate finish.

ANSWER SECOND.—For new work, take keg lead, and work it into as much dry white lead as will form it into a stiff dough, adding a small quantity of good brown japan as a dryer. The dry white lead should be well pulverized and pounded into or with the wet lead until it clings together, forming a tough mass. This putty should be allowed from two to four days to dry.

Quick drying putty, for general purposes, is mixed with japan and dry white lead.

For bruised places on panels, after the surface has been obtained, mix the putty of dry white lead and varnish, and a small proportion of japan. It will dry in twenty-four hours hard enough to bear leveling down with lump pumice stone. Deep bruises should be puttied twice or three times, allowing a day for each to dry.

For smooth putty, which does not require to be sandpapered, take one-third whiting, or dry white lead, and two-thirds lampblack, mixed in oil. This to be used to correct the defects in the iron work not fitting closely, as, for instance, under the arch, or cut-under, or any other curved surface. It clings more tenaciously than putty mixed in the usual manner; and while it would be far better to have no putty in such places, the painter must nevertheless putty up to keep the pumice stone and water out, if for no other purpose.

Bedding putty for quarter lights or glass frames. Take whiting or dry white lead, pulverize them finely, so that there shall be no grit remaining. Have the stone clean. Mix up half whiting, or dry white lead, and lampblack in japan, forming a pasty mass. There is no putty used which should be so free from grit, as it often happens that a costly glass is broken by the presence of a grain of flint.

Black Putty—Is the ordinary putty used for nail holes, &c., to which is added lampblack (dry) sufficient to darken it. It assists the painter in completing hurried and old work, as it is more easily covered by the color coats. It is very convenient to use about new work where mouldings and irons have to be put on, as it may be touched over with quick black, and the mouldings and irons colored and varnished, making a passable finish.

Quick Putty.—To fill small bruised places which may have been made on the surface while preparing to finish a piece of work, burnt umber and whiting mixed in japan. Whiting will not stain or wash up as readily as dry white lead.

BRADFORD, ONT.

MR. EDITOR:—Will you please inform me, in your next month's JOURNAL, the method of putting basket work on a large surface? also, what will make the best olive color? P. T.

ANSWER FIRST.—Your question is rather indefinite. We do not understand whether you refer to the painted imitation of basket work, or to the raised work put on with a pen or tube. If the former, it would be necessary to put on a ground work of a color which would represent the medium shade of that color which you intend to represent. For instance, if you wish to represent basket work painted straw color, the ground should be as dark as the shadows seen on the real work—painted straw color. To complete the representation, the deep shades and the high-lights, when properly distributed, would give a perfect imitation.

If you desire to represent the work in raised lines, use the striping pouch or tube, and mix the color in varnish and japan, using it heavy.

A pattern drawn on paper, with the main points pricked so that the pattern may be laid against a surface and pounced, will be found a speedy method of giving the working points.

The cheapest manner of representing painted work of the kind, is to buy the transfer basket work.

Answer Second.—Green and purple; burnt umber, yellow and black; raw umber and yellow, green, umber and yellow, drop black and Brandon yellow. The last named gives various tones, according to the proportions used, and is the cheapest.

Strictly speaking, olive is a green, compounded of blue and a small quantity of yellow and red; but carriage painters do not confine themselves strictly to these niceties. Either of those given above will produce a good color, and as tastes differ so widely, we must leave the decision to yourself.

I concur in the views of I. A., as to the importance of the tenon on the spoke coming flush with the tread of wheel; but, there is one other very important question connected with the one referred to by I. A., much depends upon the rim being properly wedged up. I am well aware that many wheelers are not very particular about their rims, so they are fair with the shoulder on the inside. Experience has taught me that here is the great mistake, the source from which serious results flow.

If your rim is not properly wedged, it will produce rim-binding, chafing or fraying of the spoke on or at the shoulder; these defects often lead to the springing of the spoke, which tends to destroy the tenon, and often causes the rim to check. These damaging effects do not stop here; they find their way to the hub, or to the shoulder of the spoke on the face of the hub. The defect here is perceptible in the face of the spoke,c hecking up immediately alongside of the tenon; this being the case, we find that there is nothing to prevent the water from soaking down alongside of the tenon into the hub, causing the same to rot; consequently, the wheel is in a manner destroyed. These are facts positive, and to the investigating mind, they are comprehensible beyond the question of a doubt.

In wedging up the rim it is very necessary that the wheeler should be a good judge of his material, for, without care or painstaking, it is impossible to turn out a good job; to accomplish this, there must be especial attention paid first to the quality of the rim. I have found in my experience that, to all appearances, there was no perceptible difference in the two felloes, when, at the same time, when I come to the setting up on the shoulder, I found that one would settle much easier than the other; such being the case our duty is plain, we must settle them both as long as they will go, being careful that the spoke is straight. When we have the rim wedged as above, we need not fear our shoulder chafing at the rim, or checking at the hub, and a sure preventtive against the water entering the hub.

Now we come to the tenon, with its importance as referred to by I. A., namely, being flush with the tread; such being the case, we find that when the tire is on there is no fear that the spoke will chafe, neither is there any chance for the shoulder to force itself into the rim, the result of which, is to cause the rim to check, or to wear down to the end of the tenon, as would be a result following the gouging out or off the end of the tenon below the face of tread. This brings us to another very important matter, that of the settling of the rim between the spokes; gouging off the tenon below the face of the tread, as above, causes the tire to wear down the rim; this weakens where the main strength is required, it also tends to loosen the tire. When the tire is loose, the joints in the rim are liable to move. This, it will be observed, produces the effect, or in other words, the tire being loose, acts the same as hooping a wheel with the joints not brought together; this gives room for the rim to settle between the spokes, in order that the rim may be closed up. There are other causes that produce the settling of the rim between the spokes, which we shall refer to in our next; but, I will make a remark, that there are two extremes producing the same effect, that of the tire being too loose or too tight.

I am pleased to see that there is a growing interest manifesting itself through the columns of the Journal, with reference to the correct principle upon which the wheel should be constructed. I am encouraged in my labors with the clear conception, as indicated in V. Ulcan's or H. D. F.'s department, for the reason that it is so closely identified with the interest of my own, and confess that I feel very grateful to friend Victim for consigning me over to the readers of the Journal, who are my judges, and in justice to him, and in payment of the gratitude I owe, I must consign him to his judges also.

For the Coach-Makers' International Journal.

Spencer, N. Y.

Mr. Editor.—As you have asked your readers to send in their ideas about rimming wheels, I give my opinion. The first thing is to get well seasoned hubs, spokes and felloes; then see that the shoulders set snug or a little dented in the rims; then wedge the felloe on, and cut the tenon just even, so the tire may press evenly on the spoke, (tenon and shoulder.) If your hub is a little green, you will need to leave the gap larger than if well seasoned. 1-16th of an inch is enough to draw ¼ inch dish when brought together snug. If my ideas are worth anything to your readers, perhaps I may write about driving spokes. I like to read different opinions made plain. E. O.

For the Coach-Makers' International Journal.

WHEEL MAKING.

I will try to comply with Spoke Shave's request and answer his questions on the subject of wheels becoming rim bound, &c. He will have to wait my own time, as I have to do ten hours' work in the shop every day, and attend to my own affairs after that, and I want some time to read; and, as I am not under pay from Spoke Shave, he will have to let me act in the matter about as I have a mind. He first asks if "I mean what I say about bringing all the mortises to one exact size?" I answer, I do, and follow that as a correct principle; second, it is very seldom that I find any great difference in the two sides of the hub. If one side is rotten, I always throw the hub away; third, in fitting my spokes, if I find one that I think needs a little more squeeze than the others, I make the difference in the tenon, or throw the spoke out for repairing, and the result is wheels that will last as long as Uncle Sam has ground for them to roll upon, (as Graduate said.)

Next, he did not know that there were any wheelers but what knew that machine-mortised hubs were not mortised exact enough without trimming. I think he needs to go out among his fellow craftsmen and talk with them a little, not so much with regular wheelers as with those that pretend to understand how to make all parts of a carriage, of which there are a much larger number that read the Journal than there are of regular wheelers. I could name some who would undertake to argue, that a man could not mortise a hub by hand as exact as they are mortised by machinery; and, if I did spend my time in writing what every one knew to be true, it was not worth while for him to spend his precious time in making remarks about it. Next, he would have preferred that I had been more definite in fitting my spokes. I think, according to his theory, we cannot have any rule that will answer for every occasion. I. A., of Middlebury, Vermont, says his rule is ⅛ of an inch squeeze to every inch in length of tenon, which I think, as a general rule, is enough. But to explain the point referred to by Spoke Shave, we will allow it correct, and our tenon 1 inch long, ⅛ squeeze at the end, and 1-16 at the shoulder, which is about as near right as I can fit them on paper, this leaves 1-16 of an inch more squeeze at the end of the tenon than at the shoulder; now, if the front of the mortise is on a straight line with the place where the front of the spoke should stand at the rim, or so that a pattern, straight on the front, inserted in the mortise, will stand in the same position that it is desired to have the spokes stand, and the spokes driven in without holding forward any, they will go back of the desired position, 1-32 of an inch to every inch in length of the spoke, or one-half of the amount that the mortise is tapered more than the tenon, which, if the spoke is 24 inches from the hub to the felloe, it would amount to 24-32 or ¾ of an inch. Now, what I wanted was that this should be regulated in trimming the mortise instead of holding the spoke forward when driving it, thereby throwing all the extra squeeze at the end of the tenon on the back side, and making the dish very apt to run out of the wheel in a very short time. If Spoke Shave does not like that word *squeeze*, he is at liberty to substitute any word that will suit him better. I hope that the above will be satisfactory. If he does not wish to drive his spokes on the rimming horse, so be it. He stated that I said I could drive them much tighter. He had better read it over again. It does not read so in the Journal that came here.

Now, friend Spoke Shave, if I have used any more than my share of sarcasm I am very sorry; but, before you grumble any more about it, you had better set me an example of sobriety, candor, correct principle, &c. However, any style that suits you will suit me, only don't grumble at others for following your example. VICTIM.

For the Coach-Makers' International Journal.

OREGON, ILL.

MR. EDITOR:—There appears to be in the JOURNAL quite a discussion on wheels and wheel making. With your consent, I will give you my experience, so far as it goes.

I will commence at once by placing the hub in the driving horse, screw on the face-stick, regulate the pin or guide in the same, for the dish required or desired when the wheel is finished with the tire on. I will now trim the face of mortises, using a straight-edge to try or true with the guide in the face-stick, being careful to have them all exactly alike; now find the largest mortise by measuring them carefully; place one spoke edgewise in a box tapering one inch to the foot, with a stop inside, regulated by a slide mortise and screw, to shut or fit the different sizes, using a plane to trim the tenon on the same. Go over the mortises, fitting them to allow the spoke to enter about ⅛ of an inch, (more or less, according as the hub is hard or soft; the same will apply to the spokes,) the tenon filling well sidewise in the mortise. Fit all the spokes as the first one, place them by the stove or fire, heat them hot; apply the glue to the mortise and drive while hot. Having driven the spokes, we will next look after the rim.

The tenon should fit as snugly as possible, and not check or split the rim. I consider a tenon with a wedge in it not much better than half a tenon. Fit the rim on snug up to the shoulders of spokes, and leave the rim open about 1-16th of an inch. Have the tenons come flush with outside of rim, that they may help to carry the tire, and thereby prevent the wheel from becoming rim-bound, also the rim is not at all liable to quash or spread out at shoulder of spoke, as is too often the case; a good tire setter is requisite, and then the wheel is perfect, according to my experience, theory, practice, &c. The above remarks apply to thoroughly seasoned timber and close work.

If this meets your approval, I will send for next month a correct rule for setting axletrees, getting a plumb spoke by the dish and largeness of wheel. S. C. D.

SHEARS, NEEDLE & TACK HAMMER

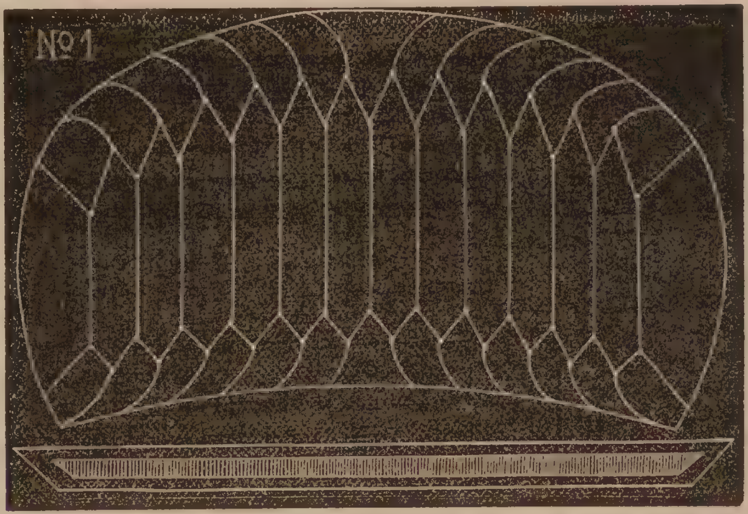
T. ACKS EDITOR

The season is at hand when the members of our craft are beginning to stir themselves, and wake up their ideas for the coming busy time. Any improvement or alteration from last year's styles begin to show in the work *now* being finished. We will therefore take our readers with us in a long search after novelty and fashion; in fact, a *cruise*, not around the world with "Fred. Pumice," but around the shops and repositories of New York City. If we find aught worth relating we will faithfully chronicle it for the use and benefit of our thousands of readers, and if any are made the wiser or the better off, it will be a pleasure to us to hear and know that our labor has not been in vain.

Ah, here we are at the first establishment, and we inquire if Mr. —— is at work to-day. "Yes." "Can I see him?" "Certainly, walk up, you will find him in the trimming shop." "Good morning, Mr. ——." "Hallo, 'Acks,' how are you? What's up to-day?" "Oh, nothing, just looking for style; thought I'd call; anything new?" "Well, no; but come walk around the repository, you might see something. We are making no alteration from last year's styles." "So I see." "Backs in squares, with covered buttons, patent leather welts, cushions in squares, very plain falls, straight joints—nothing new in style or goods." "Well, thank you. Good day."

Our observations of the first place visited amount to nothing, so far as securing anything new is concerned.

Continuing our search, we are soon at the entrance to one of the first-class houses in the trade. We are admitted without hesitation; it being our good fortune to have the *entree* of nearly all the shops in *this* village. That is a beautifully finished Clarence; the one trimm'd with crimson satin. It is well and solidly finished. The backs are made in 5½-inch rolls, and with two rows of buttons below, (thus forming squares,) and only one row above.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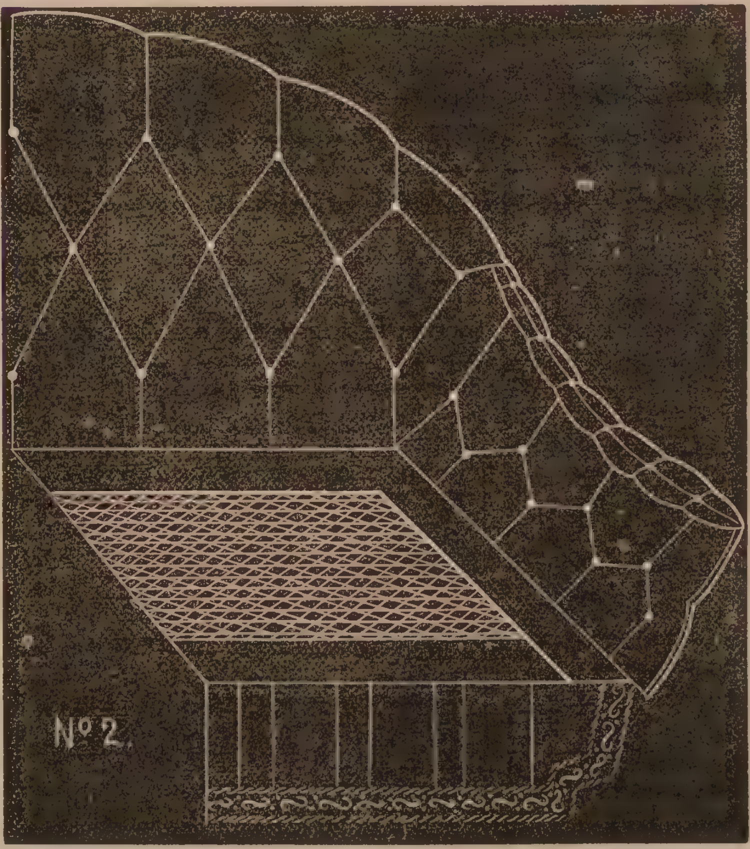
No 2.

Cushions single for each seat, and squabbed. Fall, four large plaits. Door falls, with broad lace on three sides, the centre made with the strips interlaced, *a la* checker board.

The top quarter squabs in squares, a mirror on each side, glass frames, satin inside, black cloth outside, head lining plain.

Now, let us look at some of the light work. Here is a top buggy, which has just been lowered down, finished. Oh, here is an innovation; or, rather, a return to an old style. The back is made in half diamonds, top and bottom, and finished by flaring outward from the centre; and, as our subsequent observations proved, showed a decided tendency to return to the old style of diamonds and half diamonds, with rolls. I will offer a sketch of this back, and call it back No. 1. In the rest of the work inspected here we found no material difference, except the cushion fronts, a sketch of which we give, and also a description of how to make it.

We are soon wearing out the front door mat of another stylish repository, with our eye open for items. The gentlemanly salesman, walking through the place with us, calls our attention to *something new*—a very handsome coupe in blue satin. "What do you think of that idea," said he, pointing to the head lining, where we observed a large *monogram*, embroidered or worked with bright red silk on the blue satin of the roof lining—an idea of the lady for whom it was built. "She would have it done," said our gentlemanly friend. "Well, I don't know that it looks badly. It might appear better if it was smaller. My objection is that it is too large." "But why should it not be placed there?" and I answer, "*Why not;* it is quite an ornament to the sameness of a plain roof lining." So let us set it down as something new, if it is *not an improvement*.

Ah, here is another evidence of a return to old styles. The back of this barouche is made in very large diamonds, only three rows of buttons, the quarters in half diamonds, the arm pieces in plain squares; and as this style of large diamonds is growing very fashionable, we offer a sketch of it, and call it back No. 2.

We take our leave and enter one of our leading shops for light work. Here we notice there are *no knobs* in the front bow, except the upper one near the top prop; but, instead, buckle straps, half inch wide, are stitched to the side curtains, and are buckled around the front bow when the side curtains are used. We long ago found that knobs in the front bow were very objectionable, especially when ladies ride, as their drapery was liable to get fastened on those knobs when getting in or out of the buggy.

The cushion facing, before mentioned, is also a partial return to an old style, and is made by pasting a very narrow square-edged raiser of harness leather on the cushion facing, the raiser to sag 3-16 wide, and ⅝ from the edge of the facing all around, then cover with thin collar leather, (pasted,) crease to the raiser. Now, have a strip of hard wood the size of the panel to be made, lay it on the collar leather, and hammer it down so as to set the leather into the panel. Next take cloth to cover the facing, and cut out a piece the size of the panel, then paste it on the facing, *outside of the raiser;* when dry, stitch inside and outside of the raiser. This will show a facing with a raised leather centre, *paneled*, and cloth all around it; this looks well when well and cleanly made.

Having visited those repositories where we were most likely to obtain something new, and satisfied ourselves that there was nothing to be found of startling novelty, we retraced our steps homeward, and have written out our notes for the benefit of the readers of this department.

Youth's Department.

"ROVER" AND "FIZZEN."

A TRUE STORY.

Rover and Fizzen were the names of a dog and cat, two household pets, owned by a family who resided at Cincinnati several years ago. The family consisted of a widow and her two sons, who were in humble circumstances, yet blessed with peace and contentment.

Having made arrangements to board in the family, I was soon convinced that here were two dutiful sons, who denied themselves in order to add to the comforts of their mother, and a mother who fully appreciated the worth of her noble boys.

Rover and Fizzen were doubtless softened in their disposition by the kind treatment they received, and showed as much affection for each other, and for the members of the family, as it were possible to expect from animals. A mocking bird and a canary also added to the pleasures of the little family, "pouring their throats" in joyous songs; the mocking bird treating us to his rich medley, arranged from the different notes employed by various kinds of birds.

Rover was a large mastiff that had been raised in the family, and to better display his value it will be necessary to give a short sketch of the early history of his mistress. Mrs. —— had passed through deep waters; that is, had seen a great deal of trouble, for while her sons were quite young, the startling news was brought that her husband had perished by a steamboat explosion on the Mississippi river. He was chief engineer of the ill-fated vessel, and known to be a man who would not desert his post in case of great danger while there remained a hope of saving the affrighted passengers. In this instance he was reported among the lost, and as his body was never recovered, the widow mourned and would not be comforted. If she had been permitted to receive his remains, and have them decently interred, her grief might have been assuaged as she visited his resting place and wept over him, or decorated his grave with the "immortelle." This double affliction so preyed upon her mind that her friends were fearful her reason would be impaired. She was saved from this by her love for her children, who were now dependent on her alone for support.

Her intense grief brought on convulsions, which continued at intervals during her life.

Her sons were put out to work at an early age, leaving her during the day with her only protector—faithful Rover—who, at such times, seldom left her presence, for he *knew* that she was likely, at any hour, to fall down in a spasm. On recovering her reason, after one of these attacks, the first object she beheld would be Rover, licking her hands and face, and showing his affection by all the signs with which he was gifted.

Fizzen would often be there also, purring and rubbing against her mistress; and although not gifted by nature with an instinct equal to Rover, she manifested unmistakable signs of affection.

Rover was Fizzen's staunch friend, and woe be to the strange dog or cat that ventured in the yard. He and Fizzen would eat from the same dish, or lie down together on the porch to take a nap, puss resting her head on his shaggy coat.

Rover was too large and clumsy to perform any tricks, but Fizzen had been trained to many wonderful feats.

She would jump through their arms when placed together in the form of a hoop, leap from the floor to their shoulders at one bound, or from the top of a table make a spring like a tiger on his prey, at a distance of eight or ten feet, never failing to light on the shoulders; once there, would put her paws about the neck of her master, and cuddle down, purring out her satisfaction.

At night she would come into our bed-room, spring up on the bed, and lie down as closely to either of our faces as we would allow.

Rover slept outside, and was a faithful sentinel. During the day-time he knew his place, molesting no one; but at night he claimed possession of the yard, and allowed no person to enter who was not very intimate with the family.

I boarded with the family about two years, but, after circumstances compelled me to make a change, I continued to visit them.

The sons were prosperous, and after a time purchased a comfortable home, in a distant part of the city, taking Rover and Fizzen with them. Seven years had passed away since I became acquainted with them, and in 1848 the widow was laid on her death-bed.

During her illness Rover and Fizzen were in continual anxiety, which they expressed in every way except by speech. Rover especially would whine at the bedside, and seem to say, why does not my mistress rise up again? He was caressed while she had strength to stroke him, which he repaid by licking her hand.

The morning after her death, Rover was called in, and when he bounded to the bedside there was no welcome for him. He scented of her hands and face, and then left the room.

Puss also paid her morning visit, sprang up on the bed, and showed signs of grief.

On the same day, or the following one at the furthest, neither Rover nor Fizzen made their appearance, which was so unusual that search was made for them, when they were both found dead, Rover lying out in the yard, and Fizzen in the shed. They had died of grief.

Miscellaneous.

ANVILS.

The face or table of anvils, as at present made, is often defective, having frequently hard and soft places after hardening, which face should be equally hard all over its surface, and the steel in some instances not being properly welded to the iron part or butt which forms the lower part, the anvil is thereby rendered unsound and not fit for use. Some improvements recently patented by an inventor of Sheffield, England, have for their object the removal of such defects, and consist in so making anvils that the face may be equally hard all over when finished, and in so casting or welding the butt to the head or upper table that the parts may be thoroughly amalgamated, and the anvil made more durable at a less expense than hitherto.

He first prepares a model of the size and shape of the anvil to be produced. He then places it in a box, covers it with composition, and fills up the box with sand in the ordinary manner. After the model is removed, and the sand perfectly dry (this being done in the usual way,) he first pours in the molten steel to form the face or table, then, through the same aperture, (after the steel on the table is sufficiently cool,) he pours in a very mild molten steel, which flows over the table and gives the requisite toughness and solidity to the steel beck. After a proper time has elapsed, he pours in through another opening the iron or metal, which also runs upon the steel, and forms the lower part or butt of the anvil, and a perfect amalgamation takes place between the iron and steel. The casting being complete, it is then finished in the ordinary manner for castings.

To harden the work, a large metal bosh or trough, 6 or 8 inches deep, is formed, in which is inserted a number of perforated sharp-edged bars of metal, on which the anvil is allowed to rest on its face or upper surface, either flat or slanting. A sluice communicating with a reservoir of water is then opened, and a force of cold water is allowed to flow upon the face by an upward cast, and to pass under the anvil and over the bars to any depth required. By these means a much harder and more regular surface is obtained than by the present mode of manufacture. After this the surface is ground in the ordinary way.—*Mech. Magazine.*

IRON laths are the latest idea in building. They are made of No. 20 iron, wire guage, and 1½ inches wide, resembling 1½-inch hoop iron, with a small ridge or head in the middle to stiffen it. The laths are cut in proper lengths, and afford additional security from fire.

A MAJOR in the United States army was crossing from England in one of the Cunard steamers, when one afternoon a hand on deck played "Yankee Doodle." A gruff Englishman who stood by inquired whether that was the tune the old cow died of. "Not at all," retorted the major; "that is the tune the old Bull died of."

AN Arkansas paper concludes the accidental killing of a citizen as follows: "The deceased, owing to his frequent marriages, leaves several families of numerous children, but bequeathes little else to the world."

CLUBBING WITH OTHER PERIODICALS.

We will send any of the following Periodicals with the COACH-MAKERS' INTERNATIONAL JOURNAL, for one year, at the rates below, to any who are not now subscribers to them:

		WEEKLIES.		Regular price.
JOURNAL	and	Every Saturday, for	$7 00	$8 00
"	"	Appleton's Journal,	6 00	7 00
"	"	Harper's Weekly,	6 25	7 00
"	"	Hearth and Home,	5 50	7 00
"	"	Scientific American,	5 50	6 00
"	"	Ohio Farmer.	4 50	5 00
"	"	*Independent,	5 00	5 50
"	"	Christian Union,	4 75	5 50
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"	"	American Artizan,	4 50	5 00
"	"	Harper's Bazaar,	6 25	7 00
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"	"	Rural New Yorker,	5 25	6 00
"	"	Littell's Living Age,	9 50	11 00
		MONTHLIES.		
JOURNAL	and	Manufacturer and Builder,	$4 00	$4 50
"	"	American Agriculturist,	4 00	4 50
"	"	Atlantic Monthly,	6 00	7 00
"	"	Lippincott's Magazine,	6 00	7 00
"	"	Sunday Magazine,	5 50	6 50
"	"	Home Magazine,	4 50	5 00
"	"	Our Young Folks,	4 50	5 00
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"	"	Phrenological Journal,	5 00	6 00
"	"	Galaxy,	6 00	7 00
"	"	Harper's Magazine,	6 25	7 00
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"	"	Children's Hour,	3 90	4 25
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JOURNAL	and	North American Review,	$8 00	$9 00

*To every subscriber for the *Independent*, sent with JOURNAL subscription, we will furnish, free of charge, a copy of Ritchie's splendid steel engravings of Grant and Colfax, (the price of which is $2 each.)

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

WANTED—A good Body-Maker, Blacksmith, Painter and Trimmer; also, a good man who understands running machinery for Wood-Workers. All good men wanted, and, if satisfactory, we have no objections to running the shop on the co-operative plan. For full particulars, address, WM. STOCKDALE & BROS., Ottawa, Ont.

WANTED—A good Carriage Painter to take charge of a shop. Apply immediately. Address, R. RASCH, Grand Rapids, Mich.

WANTED—A purchaser for my shops and lumber. Lot 120 by 175 feet. Would either sell or rent for a term of years. I have a fine stock of lumber on hand; about 30,000 feet. JOHN MURPHY, Steubenville, O.

WANTED.—Every Carriage Manufacturer to send us one dollar and receive in return one of our *New Office Charts for* 1870, which we are now preparing and propose to have ready for mailing by the 10th of March. The plates on this will be different from any *Office Chart* heretofore published.

See editorial notice of same in this number.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, for balance of present volume, for 75 cents each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

HARPER, HENRY, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winsted, Conn.

Brush Manufacturers.

*THUM, CHARLES D., 150 North Third street, Phila.

Carriage Body Manufacturers.

EVANS, C., 59 Rosette street, New Haven, Conn.
NORCROSS, H. S., (light,) 1712 Coates street, Phila., Pa.
SHEW, LEVI W., 127 Park street, New Haven, Conn.
TOWNSEND, C. T., 116 Dixwell av., New Haven, Conn.

Carriage Bolt Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDON, A. & M., 22d street, above Vine, Phila., Pa.
*SCOTT & DAY, 38 North Third street, Phila., Pa.
SHIELDS, WM., 23d street, above Race, Phila., Pa.
*SKELLEY, T., 24th st., below Callowhill, Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.

Carriage Castings.

*FITZGERALD & FLAGG, 218 N. Third st., Phila., Pa.

Carriage Wheels.

BROWN, S. N. & CO., Dayton, O.
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*WOODBURN, SMITH & CO., 2d & Green, St. Louis.

Coach Hardware and Trimmings.

*ATWATER, H., 1625 Market st., Phila.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
HIGH, J. J. & L., 156 Grand street, Rahway, N. J.
KEIM, GEO. DEB., 162 North Third street, Phila., Pa.
KENNEDY & CO., 305 Arch street, Phila., Pa.
*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*ROUSE, J. G. & CO., 4th & Arch sts., Phila.
*SCOTT & DAY, 38 North Third street, Phila.
SNYDER, W. & A. J., 115 North Third st., Phila.
STOTESBURY, J, M., 56 North Third street, Phila.

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*MULLER, A., 142 Second street, New York City.

Coachmakers' Tools.

WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

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*NIXON & WIGLEY, 39 North Seventh street, Phila.

Felloe, Spoke and Shaft Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Fifth Wheel Manufacturers.

HAYDEN & LETCHWORTH, Auburn, N. Y.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*SCOTT & DAY, 38 North Third street, Phila.
*WOODBURN, SMITH & CO., 2d and Green, St. Louis.

Iron Merchants and Manufacturers.

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*GARRETT, KENT & CO., Shipley st., Wilmington, Del.

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*ATWATER, H., Agent, 1625 Market st., Phila.
HACKERT & CO., 99, 101 and 103 E. Houston st., N. Y.

Paint and Varnish Brushes.

*FELTON, RAU & SIBLEY, 136 North 4th st., Phila.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*THUM, CHAS. D., 150 North Third street, Phila.

Permanent Wood Filling.

*VALENTINE & CO., Boston, Mass.

Rubber Enameled Carriage Cloth.

*ODORLESS RUBBER CO., 19 Park place, N. Y. City.

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LUCAS, JOHN & CO., 141 North Fourth street, Phila.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., Phila

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

*CROWELL, DAVID, Wood Works, Rahway, N. J.
*HOOPES BROS. & DARLINGTON, West Chester Pa.

Spring Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*GARRETT, KENT & CO., (Agents,) Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
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Tire and Sleigh Steel.

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*ATKINSON, W. & CO., 1270 Broadway, New York.
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☞Persons in want of Colored Drawings, will do well to send to G. Wertsch & Co. They promise to furnish the latest styles, drawn correctly, at a very low figure. Give them a trial. See advertisement.

CASH

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY

SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, February 20, 1870.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.

" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.

Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.

Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.

Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.

" Short, solid collar, per sett, ⅞ and 1 in., $3.75; 1⅛, $4.25; 1¼, $5; 1⅜, $7; 1½, $8.50

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.50; 1⅛, $5.00; 1¼, $6.00; 1⅜, $8; 1½, $10.25.

" Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.

" Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.

" Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 40 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.

Buckram, per yard, 16 to 20c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.40 to $2.75. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $2.25 to $3.50; Zephyrs $1.80 to $2.

" body, per yard, indigo wool-dyed, $3.75 to $4.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.

Damask, German cotton, double width, per piece 30 yds., $16.00; do., Union, $30: English worsted, from $1.50 to $2 per yd; Rattinet, 60c. to 75c. per yd.

Dashes, buggy, per dozen, rough, $20; silver plated, $30. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.35 to $2.

Enameled cloth, per yard, muslin, 5-4, 31c.; 6-4, 45c.; drilling, 5-4, 44c.; 48 inch, 46c.; 6-4: 62c.; duck, 5-4, 58c.; 50 inch, 63c.; 6-4, 70c.; pat. tan back muslin, 5-4, 45c.; do., drill, 5-4, 55c.; 48 inch, 60c.; flock drill, 48 inch, 90c.; do., muslin, 80c.; vul. rubber drill, hea., $1.37; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 14c.

Fifth wheels, Cincinnati pat., ea., ⅝, $1.25; ¾, 1.37; New York pat., ⅝, $1.12; ¾, $1.20.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50: silver capped, 60c.; silvered, $1.50; do., English, $3.50.

" Button-holes, pat., metal edge, gum centre. A new article: for quickness and simplicity of application it has no equal Price, per gross, $3.75.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $30.

Leather, per ft., dash, No. 1, 13½c.: do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 25c.; do., No. 2, 22c.; enam. trimming, 23c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.

" spoke ten. machine, each, sm., $15; large, $25.

" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.: do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $5; 2½ to 3, $5.50.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.

" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.

" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75: Bright, $16.25.

" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.

" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $2.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2.15; 1⅛, $2.50; 1¼, 2.65.

" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.

" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.

" ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.

" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6.

" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.

Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $13.50

" Bidwell's pat., 4 bows, per sett, rough, short, 50c.: 1 long iron, 56c.

" plated, short, $1.20; 1 long iron, $1.37.

" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 14c.; Bright, 15c.; 1¼ inch, 1c. per lb. more.

" Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 22c.; 1½, 3, 4 and 5 plates, not shorter than 33 inch, 21c.; shorter than 33 inch, per lb. extra, 3c.

" Bright oil-tempered, per lb., 1¼ inch, 18c.; 1½ inch, 17c.

" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50: ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top holders, Thomas patent, buggy, $5 each; extension, $7 each.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.25; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.25; No. 30, $1.45; No. 35, $1.60; No. 40, $1.80.

" Shoe, H. B., per lb., No. 10, 60c. to 82c.; No. 3, $1.00 to $1.10; No. 12, $1.30.

" dark blue, per lb., No. 10, 90c.; No. 3, $1.15; No. 12, $1.35.

" machine, Marshall's, Shrewsbury, black, No. 432, $2.50; No. 532, $3; No. 632, $3.35; white and black same price.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.45; No. 30, $1.60; No. 35, $1.80; No. 40, $$2.10; white, 25c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb., No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top. $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post. 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.

" ash, red oak and common hickory, per sett, 1,

" 1⅛ 1¼, $1.25; 1⅜ $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.

" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2.25 per set.

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in. $11; 1¾ in., $12; finished do., $12; Sleigh, $21.

" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
" " double " $4.50 "

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

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VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.25; Noble & Hoar's English, $9.25; black enamel English for carriage tops, $9; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.10; No. 1 Prussian, 70c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.50; fine crimson or claret lake, per lb., $3.00; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 40c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.15; deep, $1.10; Ger. goto. pale, $1.40; deep, $1.30; Chinese, $1.30; Trieste, $1.20; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 13c.; Colorado lead, 12c.; Nevada, 11c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 13c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.: French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.15: English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c.; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.: 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

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RESTLESSNESS.

How few persons there are who, by their words or actions, convince us they are contented, and should we recall the scenes of our youth, we would, in all probability, have presented to the mind the image of a boy who was ever seeking after novelties, and reaching forward in the attempt to grasp those things which were beyond his reach. What pictures we then painted as we looked forward to manhood; how we encircled that estate with all that was desirable in the world. To be a man, we thought was to arrive at that golden spot up the hill of life, where we should be able to satisfy our every wish, and be free from the restraints laid upon us during our minority. Money would then be no longer an object seen at a distance, and seldom held between our own fingers, to do with it whatsoever we chose. What promises we made to ourselves as to what pursuits we would engage in, and by honesty and industry acquire money, houses and lands, and move along smoothly, having every want supplied. That we were discontented in childhood and youth proves that we are naturally full of unrest. For who would not, were it possible, gladly exchange the cares and vexations, the hypocrisy and heartlessness encountered in our riper years for the innocence and joyousness of childhood, with its few imaginary deprivations.

We occasionally meet with an individual who appears to be blest with a contented mind. Such an one will attend to the daily routine of his occupation, year in and year out, apparently caring but little whether it goes well or ill, for he has but few wants, does not indulge in luxuries to any extent, and while he may heartily enjoy his daily paper, as it gives him items of interest from every section of the country, and choice bits of foreign travel, he will probably remark, "I would like to visit the different places of note in our country, or in Europe, but then there are so many inconveniences when one is traveling, that I cannot get my own consent to forego the pleasures of home."

The contented man—he who loves home, the the society of his family, and friends of long standing—who, having served an apprenticeship at some branch of trade or manufacture, follows it steadily through life, gradually increasing, but never overreaching it, is the model we would set up. We find, among carriage-makers, that the natural uneasiness and dread of restraint incident to youth, is aggravated by an imperfect apprenticeship system, and we are training young men to habits of restlessness. Not more unsteady are the thoughts of a patient, while suffering from brain fever, than are the minds of the majority of apprentices and young men in our day. Their wants are many and varied. In the shop they desire to be advanced to what they consider a higher degree in their trade long before they have mastered that which may be less honorable, yet all-important. Not being bound to remain any certain length of time, except by an agreement with the employer to leave in his hands a pittance each week as security, they feel very important, and will dictate to superiors, instead of submitting to their reasonable demands.

Foremen, as a general thing, have but little authority given them by the employer, and are powerless to enforce rules and regulations which would be both profitable to the employer, and of lasting benefit to the apprentice.

Instances have come under our observation where a surly and disobedient boy, whose conduct had become unendurable, was finally reported to the employer, and instead of the boy receiving a reprimand, he would be encouraged in his course by not being told, in plain words, that his foreman should be as implicitly obeyed as if he were the proprietor.

Too many youths are given a loose rein by their parents, who, through fear of being termed unkind, or over-anxious about their sons' welfare, allow them to spend their leisure in hunting up pleasures which tend only to make them insubordinate at home and in the shop. They contract habits of extravagance far above what their wages will allow, which make them restless and dissatisfied with their condition, and, in many instances, lead them to leave without ceremony, and go where they can obtain a trifle better pay. It is well enough to be ambitious, but when a boy is so forward as to be unable to serve out his time, according to agreement, merely because his wages are insufficient to cover his needless expenses, we may expect to see such an one arrive at manhood an imperfect workman and devoid of stability of character. They who thus demean themselves are unfitted to start fairly in the race of life. While they have employment at fair wages, they take little or no thought for the future, but spend their money as fast, if not faster, than they earn it. A season of sickness, or a few weeks of slack times, finds them penniless and in debt. All their irregularities in the affairs of life may be traced to the want of a proper training while young. Persons of this character seldom settle down, acquire property, or engage in business. Should they chance to assume the responsible position of the employer, they will be incapable of directing their own affairs in that methodical manner which insures success.

Go where we may, we hear men complaining of their lot, and anxious to exchange places with others whom they imagine to be more pleasantly situated, and thus throughout society there is a stream of disquiet ever winding its way, which will not be greatly lessened until the youth are trained to habits of industry, frugality and temperance in all things pertaining to life.

GLEANINGS.

Topliff & Ely's "Steel Tubular Bow Socket" is an improvement which cannot fail to commend itself to every carriage-maker in the country. * * On our recent visit to Wilmington, Delaware, we found the carriage builders there alive to business. They were preparing for the spring trade hopefully at least. * * The Delaware Carriage Works is the name of a new firm at Wilmington, who occupy the premises formerly in possession of Mr. Stimmel. * * Iron and Brass-hubbed Wheels are beginning to attract some attention throughout the country. Properly constructed, they have proven to be very serviceable. * * The *New Haven Palladium* thinks that this spring will witness more strikes than any season since the close of the war; that we have heretofore seen only the skirmishing lines of the conflict between labor and capital, and that just now the two sides are preparing for the contest which shall decide the issue. * * Orders for our new Office Chart continue to come in. We have been somewhat delayed in getting it out, but hope to have it mailed to those who have ordered before this number reaches them. Send your orders right along. * * The proposed Convention of carriage-makers, which was to have convened this spring, will probably be postponed until fall, in order to accommodate the Western employers. * * A Colorado mine has yielded $200,000 worth of silver since 1867. * * The water power of Maine is estimated at 4,000,000 of horses. Railroads in South Carolina have reduced their fare to emigrants to one cent a mile. * * The Constitution of the Brewster & Co. Industrial Association should be read carefully; a copy of it will be found in full in this number. * * The London correspondent of the *Hub* recommends the use of "cider" as a preventive against the enameling of English varnish when it is to be applied over another coat of English. A mixture of one part of japan gold size and three parts turpentine, constitute this "cider," for which it is claimed that after a body is rubbed down and coated with the "cider," another coat of English may be laid on with perfect safety. The body to be coated in the morning and varnished in the afternoon when in a hurry. * * French zinc white works more pleasantly for striping than white lead, known as flake, cremnitz, &c. It works up finely under the palette knife, with but little grinding. * * Hearses are being painted white throughout. We lately saw two finished in this manner, but think the effect is anything but pleasing. The carriage-part soon begins to look shabby, for the paint will flake off along the beds and bars, showing black streaks. * * Our carriage-makers report business as looking up. Sales of finished work have opened encouragingly with some of the leading builders, while others, who report sales rather slow, have fully as many orders as they could reasonably expect. * * Anderson & Lengert is the style of a new firm in San Francisco, Cal. They build carriages and wagons. Success attend them. * * Subscriptions from Canada are steadily on the increase. A club of twelve from Brantford, Ont., was lately sent by our friend Robert Nickerson. It is a pleasure to labor while we are aware that our efforts to please are so highly appreciated. * * The *Harness and Carriage Journal* reports that "the fashion for harness is plainer than ever." Plain rich work, either on harness or a carriage, is more in accordance with good taste than the "staring" appearance of filagree work and gaudy colors. * * Times are reported dull at West Eau Claire, Wis.

* * *

STEEL TUBULAR BOW SOCKETS.

Topliff & Ely, Elyria, Ohio, whose names are familiar to our readers through the advertising columns, have lately introduced an improvement for falling-top work, which, unlike a great many new things, recommends itself on sight—we refer to their "Steel Tubular Bow Sockets."

To those who have not seen a set of them, we would state that their use of the term "bow sockets" would lead to the supposition that the improvement was on a bow socket proper; on the contrary, it is a substitute for the leather bow cover and slat iron. The tubes are made in the form of a bow when covered, and taper down as neatly to the slat irons as could be desired. They are japanned, which renders the coating of black firm and glossy.

They appear light, and are much stronger than the wooden bow, and, it is claimed, cheaper. In setting a top, no more work is required by draft or frame, and it is less trouble to fit the bows than by the old method. In the May number their advertisement will appear, when, by the drawings and specifications, a fuller idea of them may be obtained.

* * *

ADVERTISEMENTS.

Kemper Brothers, dealers in Carriage Goods, 168 Main street, Cincinnati, Ohio, continue their advertisement. This house is widely known, West and South, and has, from our personal knowledge, built up a heavy trade in a few years, and we doubt whether any Western firm in their line has risen so rapidly in favor among carriage-makers. In answer to our letter, asking for a sketch of their history, we have been put in possession of the following facts: The firm of whom they are the successors, commenced the saddlery and coach hardware business, in Cincinnati, in the year 1854, under the firm name of Hunter, Coburn & Edmeston. In the spring of 1856, Henry L. Kemper bought the interest of Mr. Coburn, and the firm was changed to Hunter, Edmeston & Co.

In 1858 they removed to their present location, No. 168 Main street, occupying a large new iron-front building, 22 by 160 feet, four stories and basement. In the year 1863, Mr. H. L. K. bought the interest of his partners, and associated his brothers, H. F. and C. C. Kemper, with him, under the firm name of Kemper Brothers. In 1864 they discontinued their saddlery department, and have subsequently devoted their whole attention to carriage goods, making a *specialty* of them. Since then their trade has increased threefold, extending throughout the Western and Southern States. Making a specialty of their goods, they carry, if not *the* largest, at least *one* of the largest and best assorted stocks of goods in the country.

The brothers are all young men, have ample capital, know what their trade requires, and claim to offer inducements to customers equal to any house East or West. They keep the best brands of goods that are made, and those wanting a fine article may be supplied on short notice. Attention is directed to their advertisement in the back part of the Journal.

Colgate & Co., 401 and 403 Illinois street, Chicago, whose advertisement appears in this number, manufacture Railway, Coach and Implement Varnishes. We called at this establishment last spring, and solicited an advertisement, and on being shown through the factory, were greatly pleased at the perfection of arrangements for carrying on the business.

They had a heavy stock of coach varnishes on hand, but would not give us an advertisement at that time, for a reason which will, in the end, place their varnishes among the best in this country. Mr. C. remarked that, "Our varnish is too new to be put on the market; when it is well matured, or ripened, we will advertise it." Here was honesty of purpose which must meet a liberal reward.

Using only choice Zanzibar copal gum, pure linseed oil and white spirits turpentine, they claim to make an article which shall successfully compete with the best English brands. Firm in the belief that American varnish can do it, they propose to patiently labor and wait for the realization of that end.

Carswell & Vandenbraak, Wilmington Axle Works, at Wilmington, Del., continue their advertisement. They are well and favorably known to many of our readers. Their axles are made of the best material, and warranted to give entire satisfaction. Sold by dealers throughout the country.

Sterrick's Patent Wheel.--On the colored leaf in this number may be found drawings and a description of this wheel, which will be readily understood by those who have not seen a "Sterrick Wheel." Heretofore the difficulty has been to make a serviceable wheel by the use of a metal hub and wooden spokes. By inserting rubber between the hub and spokes this objection is removed. This make of wheel was tested by the inventor for two years before he brought it before the public. He had a few buggies built, and placed some of them in livery stables, and others in the hands of physicians, who, it is well known, put wheels to a severe trial. Their durability was, however, fully established, and since then he has devoted his time to perfecting them, now claiming that every objection to a metallic hub has been overcome. We have seen the wheel in the different stages of its manufacture, and the completed set ready for shipment, and must acknowledge that they present a handsome appearance. Great strength and beauty of finish, to which may be added the easy manner of repairing, combine to make the "Sterrick Wheel" well worthy the special attention of the trade. R. M. Brinton & Co., axle manufacturers, 219, 221, 223 and 225 Levant street, Philadelphia, are the manufacturers and agents for the Eastern and Southern States, and report the demand for the patent wheel as being very lively.

Having lately visited their works, we were not a little interested in the process of axle making. They have a foundry, and melt their own iron. In the moulding room we were shown the *metal* "cores" on which the heavy axle boxes are formed. The liquid metal, coming in contact with the "core," is chilled, and changed into a kind of steel on the inside of the box, while the remainder of it is soft and tenacious.

In an adjoining room the heavy thud, thud of a steam hammer was forming axles with solid colors. Two men were feeding the red-hot bars to it, and as the power was applied, the dies speedily changed the plain bar into the form of an axle arm. In the second story the lathes and other machinery adapted to their line are in full operation. Their axles are all turned and trued to the boxes. The axle, having been placed in a suitable device, is made to revolve very rapidly, and while in motion, oil and emery are applied by the finisher, and then the box slipped on. By this means the two surfaces are made to a perfect fit. The boxes are turned off outside and inside. The machinery for turning off the inside of boxes stands perpendicularly, which is an improvement over the horizontal, as the box does not retain any portion of sand or cuttings, they dropping out as soon as they are formed.

Case hardening is done by a new process, which is the invention of a member of the firm, that has lessened the cost to them very materially. The whole process is carried on under the immediate supervision of the firm, and as they make their own machinery, and have every convenience and appliance for doing their work rapidly, they are enabled to compete with other responsible houses. See their advertisement in connection with the "Patent Wheel."

G. Wertsch & Co., Carriage Architects, No. 121 Avenue A, New York, are prepared to furnish carriage drawings, from the simplest to the most elaborate style. They are practical carriage makers, and have had experience in the best houses of Paris and New York. A reference to their advertisement will put the reader in possession of their prices, and the various kinds of work they propose to do.

Bridgeport Spring Co., Bridgeport, Conn., continue their advertisement. They manufacture all kinds of carriage springs and axles. Their name is as a household word almost among carriage makers throughout the country, the uniform good quality of their products having given them this enviable position.

M. Shoemaker, No. 1439 Hutchinson street, Philadelphia, manufactures all kinds of elliptic coach and platform springs from best English brand of steel. Parties dealing with Mr. Shoemaker may rely on being served with an A No. 1 article. He continues his advertisement, which please see.

C. D. Thum, Brush Manufacturer, No. 150 North Third street, is still desirous of keeping his brushes before the craft. Having been benefited by furnishing an article of his own manufacture, equal in every respect to what was claimed for it, he has won the confidence of the people by fair dealing, and now finds his business rapidly increasing. He possesses a secret in the make of his brushes which others have failed to search out. Besides the justly celebrated "half elastic" brushes, he keeps a full assortment of paint and varnish brushes, fitches, camel and sable hair pencils, &c.. Also manufactures an improved brush for putting on "Piotrowski's permanent wood filling." Read carefully his enlarged advertisement.

G. W. Watson & Co., whose fame as first-class coach builders is wide spread, are still manufacturing Gardner's patent pole and shaft coupling. They have made some alterations on the original model, and inform us that the demand for them is steadily increasing. Parties in Philadelphia, who have tested them, will have no other. Much time is saved in changing from pole to shafts, and their freedom from rattling makes a very desirable improvement. George W. Watson & Co., sole manufacturers, No. 825 North Thirteenth street, Philadelphia.

L. W. Wakefield, Minneapolis, Minn., continues to call the attention of our readers to his patent axle-box. It does away with wedging the boxes, makes a neat finish, and is a perfect antidote for loose boxes. This invention is worthy of attention by builders. Address as above.

PUBLIC SALE.

J. S. Lane, 1904 Market street, Philadelphia, will sell on Thursday, April 7th, 1870, his entire stock of finished and unfinished work. Also, materials, tools, &c., requisite in a carriage factory. See advertisement on outside cover.

CONSTITUTION of the BREWSTER & CO. INDUSTRIAL ASSOCIATION.

In the after part of this number of the Journal may be found the Constitution of the above association. Having previously published the circumstances connected with the inauguration of this plan, and an idea as to the management of the shop under it, we are now pleased to be able to place before our readers the Constitution in full. We have had several letters of inquiry relative to co-operation, and special inquiries regarding the Brewster & Co. industrial plan. Our replies could not have been of much value, for it is one thing to read about co-operation, and quite a different matter to be personally acquainted with its workings. Therefore, not having had the requisite experience to constitute us good judges, we could do no more than give our notions for what they were worth. With this Constitution before them, our readers will have something well worth studying, and on which they may lay out other plans, adopting or rejecting articles as they may see proper. In its twenty-three articles, considerable ground is covered, and there is no important point bearing on the success of the enterprise which has been overlooked. From *our* standpoint, we might raise some objections; but when we remember how many conflicting elements there are to control and bring into harmonious working, in any undertaking where it is sought to bring different minds to meet and work for a common end, we forbear criticism. We have nothing but good wishes to express, confident that those who are personally interested are the best judges of what is just and right.

CHANGE OF ADDRESS.

Post, Herkner & Co., general agents for the Odorless Rubber Enameled Cloth, whose advertisement has become familiar to our readers, have removed from 19 Park place to 19 Murray street, New York. We make this statement to call attention to the change, which did not appear in a portion of our last issue, as we received the information after about one-third the edition was run off. Those who desire the best quality of rubber cloth for the various purposes to which it may be applied, will not fail to read their advertisement, and send on their orders.

OFFICE CHART FOR 1870.

Before this number reaches our subscribers, we trust our new Office Chart will be ready for mailing. We had expected to have been able to mail it before the 10th of March, but circumstances, over which we had no control, prevented us doing so. We are sparing no efforts to make this the most tasty *office chart* ever offered to the public. It will contain the latest styles, both light and heavy, printed on heavy lithograph plate paper, 24 by 30 inches.

The oval centre will be left blank. Persons desiring their names printed therein, will be charged $2 extra. Five charts, with name in centre, (in color,) sent, post paid, $6. Six charts, post paid, *blank centre*, $5.

Sent on roller, to prevent breaking. Orders filled promptly.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "French or Square Rule" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Vol IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted.

Fashion Plates Explained.

CLARENCE ROCKAWAY.

Plate No. 27.—Among the different styles of vehicles built by the carriage-maker, we think none are more difficult than the rockaway when the builder desires to produce a pattern of striking beauty. There has been a marked improvement of late in this class of work, and we think the one here given will add another to the list, which will take rank among the best.

This has a 10-inch circle, and can be increased so as to adapt it to a six-seat rockaway. The front inside seat is pivoted at each end, and when in use the fall is raised, the seat turned down, and the fall, which is squabbed, forms the cushion and back. The frame is caned. The back quarter is shifting, close, glass and curtained. The glass front may be removed, and with the curtained quarters form a pleasant summer carriage.

Dimensions.—Width of body: 50 inches over all; 4 inches turn-under; front contracted to 28 inches, with concave. The box step is operated by a lever under the body, and attached to the bottom of door. Hubs: $4\frac{5}{8}$ by 7 inches. Front band: $3\frac{1}{4}$; back band: $3\frac{7}{8}$. Spokes: $1\frac{1}{4}$. Tire: $1\frac{1}{8}$ by $\frac{1}{4}$. Axles: $1\frac{1}{4}$. Springs: $1\frac{1}{2}$, 5 plates. Wheels: 3 feet 5 inches, and 4 feet 1 inch. Track: 5 feet.

Painting.—Body: panels deep sea green, *mixed of Dutch pink and Prussian blue*, which must be glazed over a groundwork of dark green. Belt: lake. Mouldings, if striped, traced with a fine line white. Carriage-part: carmine, striped, with $\frac{3}{8}$ line of black; fine lines of white.

Trimming.—Dark green cloth, with black welt. Carpet, with green figure and red border, in fret work.

Mounting: gold.

CIRCULAR HEARSE.

Plate No. 28.—This design has points of originality which will be appreciated by those who give much attention to this class of vehicles. The front and back are circular. The front has a 6-inch circle; the glass frames passing each other the same as a Clarence coach. The back a $10\frac{1}{2}$-inch circle, which forms the doors. The advantages are that it shortens the side elevation of the body, and also the coupling, yet allowing for a full-sized casket. The shortening of the coupling on a hearse is a point gained which cannot be over-estimated. The question has been often asked, why it is that a hearse runs heavier than a coach? We think it is due to the length of the body, which necessitates a long coupling. In the design here shown, we have endeavored to remove that objection. Another point is, the boot being attached to the body relieves it of that trembling motion which loops produce. The front is represented in this plate with a hammer cloth, which covers a round boot. The hammer cloth may be removed, and a dickey seat attached, giving an entirely different appearance to the front.

Dimensions.—Width of body: 41 inches. Boot: 30 inches. Length of side glass: 76 inches. Height: 27 inches. These should be heavy French plate. Back and front the same, with beveled edge. The urns may be either six or eight in number. They are detachable by means of a brass screw and socket. The plumes are of the latest pattern; they are made of feathers, and clipped to the shape here shown. When the hearse is equipped, and in motion, these upright plumes aid in producing a stately yet solemn effect. We have omitted a railing, as they are out of date. Width of track for casket should be 18 inches, sunk 2 inches.

We have introduced a railing on each side of the track. The ends of the railing and standards have a dart finish. A silver cord hangs in the form of a festoon from the railing, with a centre drop and dart, which agrees with the cord connected with the drapery above. Hubs: $4\frac{7}{8}$ by $7\frac{1}{2}$. Front band: $3\frac{1}{2}$; back band: $4\frac{1}{8}$. Spokes: 1 5-16. Tire: $1\frac{1}{8}$ by $\frac{1}{4}$. Axles: $1\frac{1}{4}$. Springs: $1\frac{1}{2}$, 5 plates. Wheels: 4 feet 2 inches, and 3 feet 7 inches. Track: 5 feet.

Trimming.—Fine black broadcloth, with silver lace. Drapery as shown. Cord, with dart head finish.

Painting.—Inside of body: white. The body and carriage: black. The body relieved by a white stripe on the raised centre of the oval moulding. Carriage-part: striped, with a broad line of white. There should not be an excess of striping, but merely sufficient to relieve the carriage, and bring it into harmony with the body. The spokes may be striped or not as taste may dictate. The hubs, face of spokes and felloes, and a reasonable amount on the inside carriage, would be in accordance with our taste.

Plumes: white, tipped with black.

Mounting: silver.

ONEIDA ROCKAWAY.

Plate No. 29.—This we may safely pronounce a beauty. It is light and graceful, possessing sufficient variety of lines to at once attract attention when in the wareroom.

Dimensions.—Width of body: 40 inches on seat. Hubs: 4 by $6\frac{1}{2}$. Front band: $2\frac{3}{4}$; back band: $3\frac{3}{8}$. Spokes: 1 inch. Tire: $\frac{7}{8}$ by 3-16. Axles: 1 inch by $\frac{7}{8}$, steel. Wheels: 3 feet 8 inches, and 4 feet. Track: 5 feet.

Painting.—Body: panels lake. Carriage-part: black, striped lake and orange.

Trimming.—Brown cloth.

HAYWARD BUGGY.

Plate No. 30.—A round corner, swelled deck panel. Body, with arch moulding on side as shown. The irregular shaped small panel may be painted some color different from the rest of the body, or lined in imitation of basket work.

Dimensions.—Width of seat to take 42-inch bow. Hubs: 6 by $3\frac{1}{2}$. Front band: $2\frac{3}{8}$; back band: $2\frac{7}{8}$. Spokes: $\frac{7}{8}$. Tire: $\frac{7}{8}$ by 3-16. Axles: $\frac{7}{8}$. Wheels: 3 feet 11 inches, and 4 feet 2 in.

Painting.—Body: panels dark brown. Carriage-part: black, striped brown, and fine lines of orange.

Trimming.—Pearl colored cloth.

Mounting: gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents.*

For the Coach-Makers' International Journal.

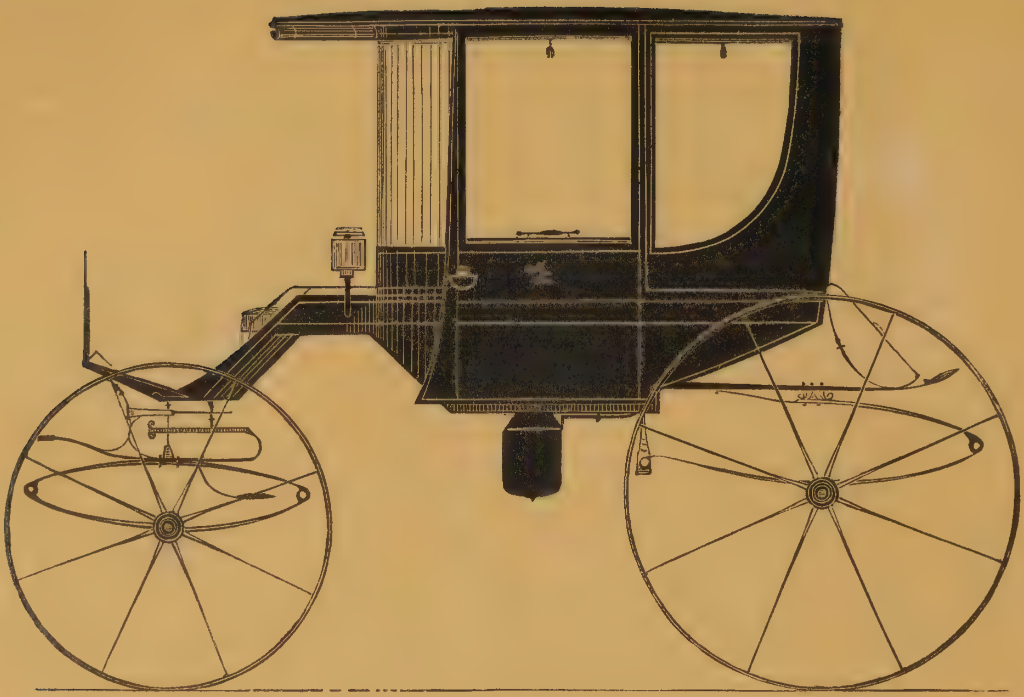
A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,

Author of "Stray Steps," &c.

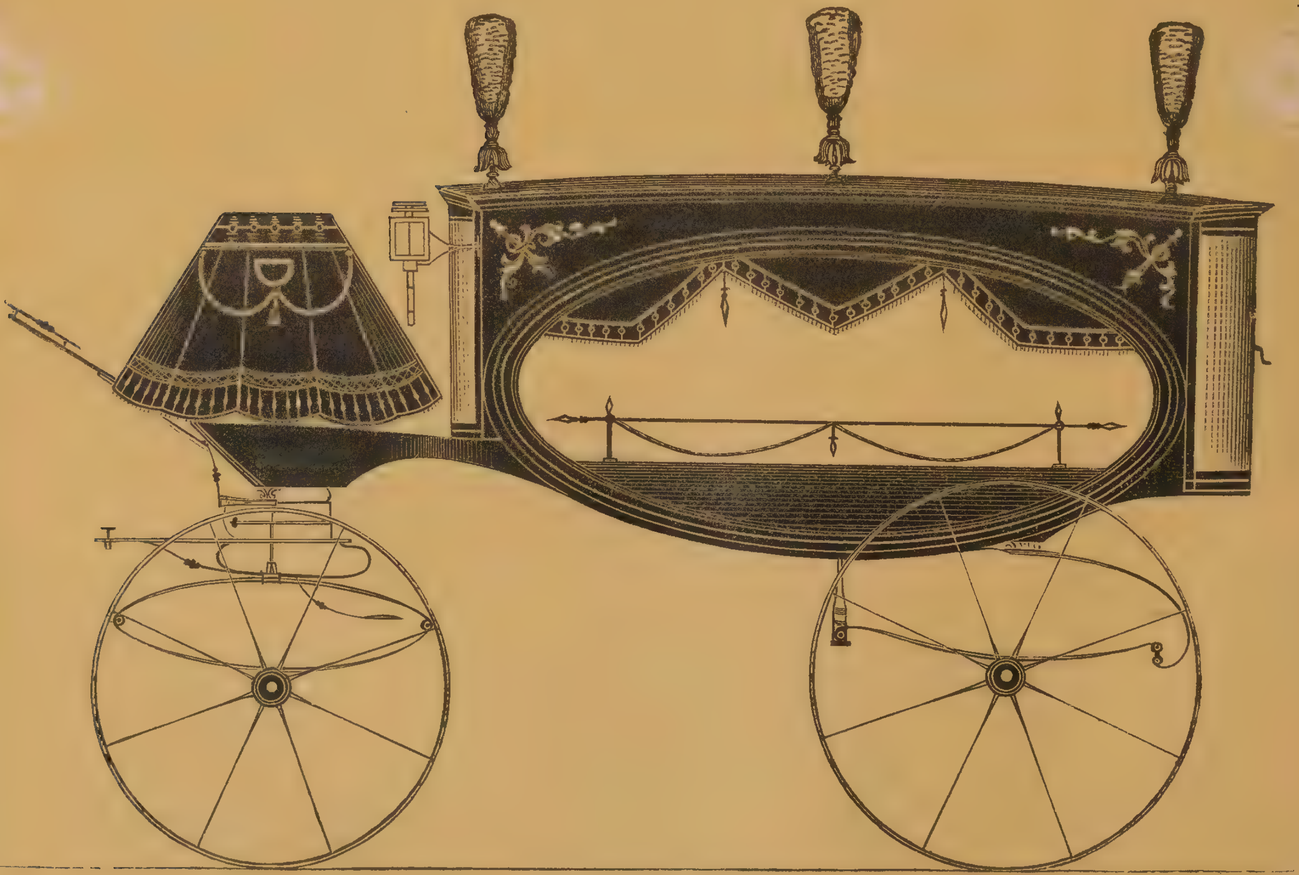
CHAPTER X.

The harbor of Port Louis is not a very safe one, except for ships close up to the few docks which are as yet finished. Almost all the heavy ships remain in the outer harbor, and load or unload by lighters. For the first three months of the year, (or the hurricane months as they are called out here,) vessels must be at all times ready to go to sea, for the hurricane comes on with mighty short notice, and the



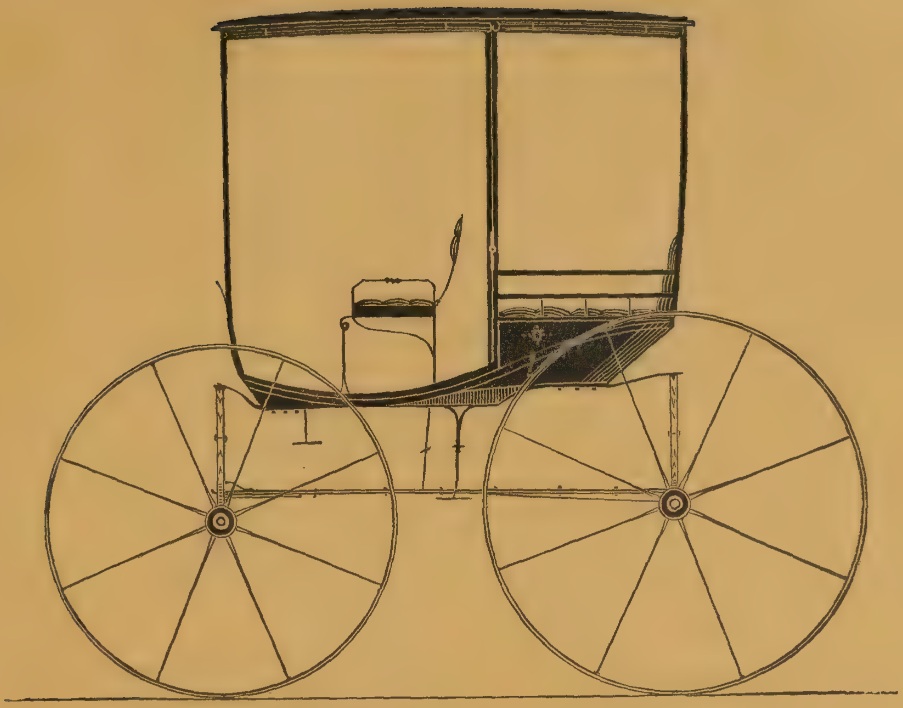
CLARENCE ROCKAWAY.

Plate No. 27.—Half-inch Scale.—Explanation on page 100.



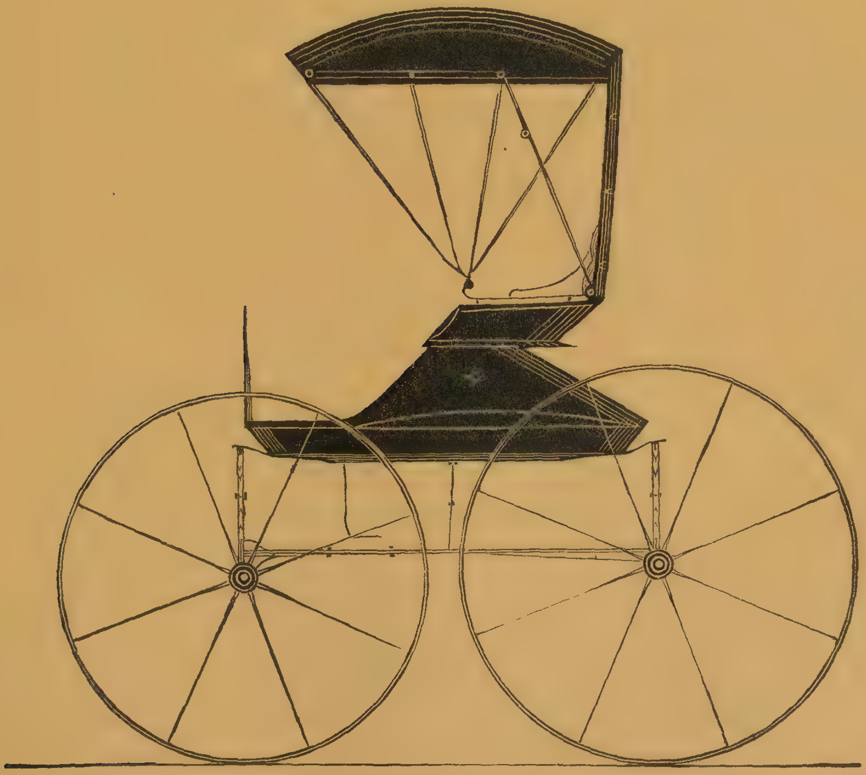
CIRCULAR HEARSE.

Plate No. 28.—Half-inch Scale.—Explanation on page 100.



ONEIDA ROCKAWAY.

Plate No. 29.—Half-inch Scale.—Explanation on page 100.



HAYWARD BUGGY.

Plate No. 30.—Half-inch Scale.—Explanation on page 100.

captain who is not prepared for it will suffer. When a hurricane is coming on, and the barometer keeps falling, a gun is fired from the fort; this is the signal to take down upper masts and spars. Then the sailors have a busy and an anxious time of it, getting ready to meet the Storm King in the regions where he rules supreme. Extra anchors and chains and cables are run out, sails furled close, and everything made as snug as time will allow; and soon comes a flash of lightning, almost blinding in its brilliancy, while in the distance can be heard a dull steady warring as the tempest advances, and the air gets close and murky. Soon again you see the trees away off on the Peter Botte Mountain are bending and swinging, and their branches and leaves are flying before the coming gale. In the town and around the wharves sugar and coffee is being removed double quick, to get it under shelter; windows are closed and doors barred, and now it comes howling along, tearing trees, branches, fruit, and all loose articles before it, and now your ship feels the force of the wind, and you feel her keeling over, until her scuppers are almost in the water, and the crew have to hold on by their "eyelids." Soon she rights and heads up to the wind, and for the remainder of that day and night "all hands" on deck have a lively time of it. If it increases, a flag is hoisted at the post office for all ships outside to go to sea. This flag has a blue cross on it, and many a crew felt cross and blue at sight of this silent but *imperative* command. The houses on shore are all furnished with stout hurricane shutters, because such is the force of the wind that no glass could stand it for a minute. The wind generally begins to blow from the northeast, but soon changes to the opposite quarter. One experience of a Mauritius hurricane was enough for me. I *want no more of it.* Next day the town looked bad; in fact, it looked the worse for wear. Trees were uprooted, or branches were twisted off. Nearly all the beautiful flower gardens were despoiled of their treasures. Chimneys were nowhere, and a few roofs were lying around loose.

The atmosphere of this place is exceedingly rarified, and a few words may not be out of place about it. You can see objects at an astonishing distance; so far that I hesitate to indicate how far. But in this connection I will relate an extraordinary phenomenon from this cause. If it were not an undoubted *historical* fact, I would not believe it myself. In 1810, during the war between France and England, this island of Mauritius was in the possession of the French, who kept a strong garrison here. Napoleon was anxious to keep this half-way house safe, but it was supposed that the British *might* attempt to wrest it from him. At this time there resided in Port Louis an old Frenchman, named Filify, who had a gift of long sight, as it was called; he claimed to be able to see ships *two hundred miles away at sea,* and he often proved it. One day he went down to the head-quarters of the French Governor, and asked for an interview, when he stated that he saw an English fleet assembling at the Rodriguez Group, and that they were receiving soldiers from transports. "When did you see it?" asked the Governor. "I saw it ten minutes since," answered M. Filify. "Oh, you are crazy," said the Governor. "Why, man, the Rodriguez is over 300 miles northeast of this place." "I know it, sir; but, nevertheless, I can see what I tell you." The Governor would not believe him, but ordered him to prison for attempting to create unnecessary excitement, he being disloyal. No preparation was made, but in four days after a British fleet, with 10,000 soldiers on board, was thundering at the forts of Port Louis, and the island was taken from France. It afterward was proven that, at the time specified by M. Filify, the British fleet was actually engaged as he stated, for they were receiving the troops collected from the Cape of Good Hope and the East Indies. M. Filify's gift of far sight was appreciated by the English, and he was pensioned by them, and so thenceforward he used to come down to the post office every evening, and take his station on Signal Hill. The officer would ask: "What is in your sight, Mr. Filify?" (He did not say what do you see.) The old man would look against the sky, toward the horizon, and answer, for instance, "I see a ship with foremast gone; she is about 100 miles off; they are getting up a jury mast; she is trying to beat up to the harbor;" or, "I see a large man-of-war steering northeast," and in all cases his report would be written down, *and he was invariably correct.* He was taken to the contiguous island of Bourbon, but he could not exercise his powers there, because the air was not so rarified as at Mauritius. And again, his fame was so great that he was taken to France and England, but failed there also, and for the same reason. When he was seventy years old he undertook to teach his art to a lady, but with only partial success. It must be remembered that he did not look at the water, but always at the sky.

[TO BE CONTINUED.]

PENCIL RULE & SQUARE

D. BOARD EDITOR

SCALE DRAFTING.

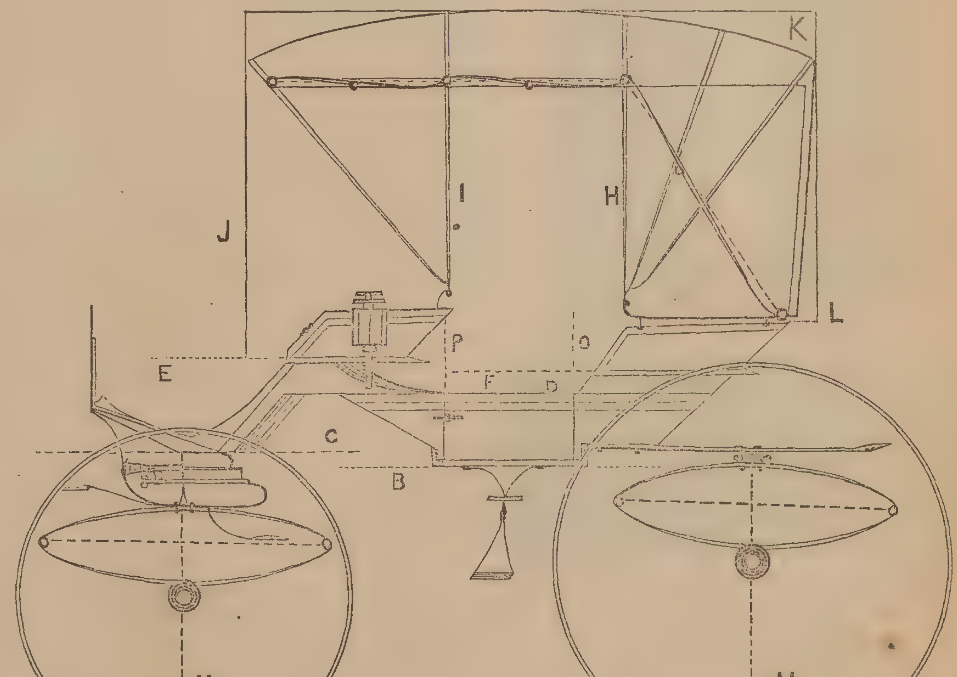
Continued from page 87.—Scale ½ inch.

In continuation of Scale Drafting, we give in this number a four-seat and four-spring phæton. Having begun by taking up a plain buggy, we next gave one with curved lines, and now we present to the student an extension-top phæton.

By degrees we have led the way from plain work up to that requiring more skill, and without further comment will proceed to the explanation of the one in hand. Having secured the Bristol paper to the drawing board, as described on page 7, of this volume, draw base line *A;* from this line measure 37 inches, and draw dotted base line of body *B.* From line *B* measure 1½ inches, and draw dotted line *C,* this being the base of the front. From line *B* measure 8½ inches, and draw line *D.* From this measure 3 inches, and draw line *F,* this being full height of the back-seat frame. From *F* measure 1½ inches, and produce line *E,* this giving the full height of frame on the front seat, elevating it 1½ inches higher than the back seat. From *E* measure 44 inches, and draw line *K,* giving the full height of top.

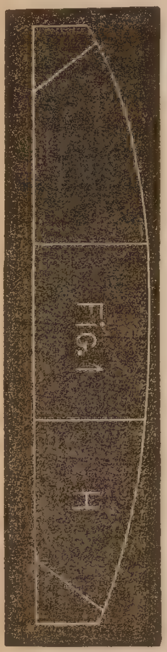
Having established the different points in ascending, we will now lay out for width of door, by drawing dotted lines *O* and *P,* which are 17½ inches apart. Next in order is the height of wheels. Hind ones 4 feet 2 inches. Measure from vertical line *O* 23 inches, and draw vertical line *M;* this allows the wheel to advance 2 inches front of door, and gives ample room for its opening.

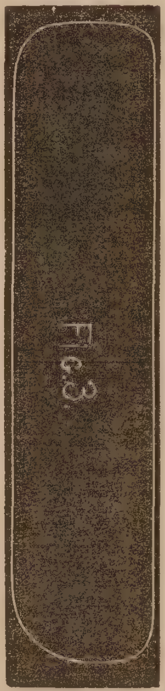
Strike the hind wheel as heretofore given. Measure from centre of wheel 12 inches for height of spring. From this point measure 1⅛ inches for depth of back bar; this establishes the bottom of pump handle, also the square cut in body, which we intend to make harmo-

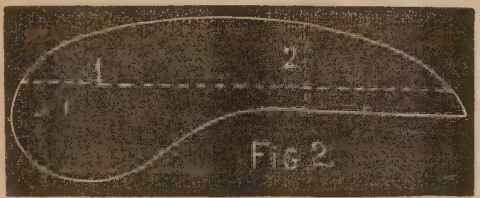


nize with the carriage and body. Next we establish height of front wheel, which is 3 feet 6 inches, and allows 4 inches clear on the line *D* when turned under the body. In fixing vertical line *N*, it depends on the width of track; this principle was fully illustrated in publishing the French Rule, and also on page 7; that is, the space required for the wheel to turn was regulated by width of track. Having established vertical line *N*, strike the wheel. From centre of wheel measure 12 inches, which gives the height of spring, also bottom plate, bottom bed, fifth wheels, top bed, which is curved, throwing the king bolt 8 inches in advance of centre, leaving room for a turned collar for the body to rest upon.

Next, lay out for the width of seats, the back one being 18 inches on seat frame, the bevels to be laid off with the rectangular protractor, according to the style in vogue. From the extreme point of back seat measure 3 inches, and draw vertical line *L;* this line showing the flare of the back of top. Lay out for the shifting rail, and draw vertical line *H.* From this measure off 21½ inches, and draw vertical line *I;* this giving the width of the two centre bows. From front of front seat measure 6 inches, and draw vertical line *J;* also, from same point, measure 22 inches, and establish the dash line. Having now noted all the points from base line upward, and from vertical line *N* to the dash line, we will apply the sweep patterns, where the square and protractor have not been used.







We will now apply sweep pattern, *Fig.* 1, to the top *H*, being the back part; it has the back, centre and front bows laid out on it, the top having 4½ inches round.

Fig. 2 is the spring pattern, dotted line *No.* 1 showing the horizontal centre, and *No.* 2 the vertical centre. These we draw in quarter sections. This pattern will suit for the majority of elliptic springs, where side view is given.

Fig. 3. will be found a very useful pattern in forming short curves, as each illustrates a different sweep. The other sweep patterns necessary for completing the body line may be found on page 72, this volume.

For sweep of centre step, and other short sweeps of iron work, use the small irregular curves, which we introduced on page 169, Vol. IV. The joints, door handle, lamp, and all other points not mentioned, to be drawn as laid out in the diagram. In the next number we will complete the draft here given, by showing the inking in.

LONDON, ONT., MARCH, 1870.

MR. EDITOR:—I am troubled a little sometimes in finding out the width of some of your buggy bodies, and also I would like if you would be so kind as to mention through the JOURNAL the flare, if any in them, as you produce them. The JOURNAL is well patronized here, and we altogether go by it; so it's natural that we should be a little inquisitive. In your explanations you mention the width of bows only in top jobs. I think it hardly sufficient, as in our own case, the flare of seat panels and rails vary so it would be hard to find two jobs alike. Yours, &c., J. F.

ANSWER.—In giving the width of bows we consider it all that is required, being the only measurement of importance, because allowance must be made for the seat room first, the remaining part to be made subject to it. A stationary falling-top would require a wider seat than one designed for a shifting rail, which is too plain to need further remark. In laying out bodies for a working draft, it is preferable to draw a half-end view with the flare of the body, projection of seat, flare of same, projection of shifting rail. From this point, measure half width of bow, and strike centre line. This principle will always give the width of bow desired, and was illustrated on page 60, Vol. 3.

AMESBURY, MASS., March, 1870.

MR. EDITOR:—If it would not be too much trouble, I would like you to show the laying out and pricking off of round corners. Your explanations have otherwise been very clear indeed. L. W. C.

ANSWER.—You do not specify as to the kind of corner you wish laid out. If a solid corner, use a pattern made to suit the taste. For frame work paneled, we will give a full description in future numbers. We are pleased to have these nice points brought up, and intend to answer at length as soon as time and space will permit.

WHEEL HORSE & MALLET

SPOKE SHAVE EDITOR

THE question as referred to in our last communication is one of vital interest to the trade. The results following the failure to have the tenon fair with the face of the tread of wheel is, when properly considered, detrimental to the wear of the same. The effects from this cause find their way to every portion of the wheel. We remarked, in our last, that it tended to the sinking down of the rim between the spokes. We also stated that there were other causes that produced the same effect. The hooping of the wheel too tight is, in my judgment, quite as damaging to them. If the tire has too much draw, it destroys the life of the wheel. When the life of the wheel is thus affected, the result can be very readily discovered. If you turn a corner shortly, or drive out of a railroad track, you will find that if the speed is only ordinary, it produces a strain on the wheel. If so, then what follows? Some portion of the wheel has to bear an extraordinary portion of labor. The spokes are all perfectly straight. The draw of the tire has a very small proportion of bearing on the spoke, for the reason that the rim is not jointed in proportion to the draw of the tire. This being the case, where and what is the relationship as to the bearings of rim and tire? We next come in contact with some obstruction not ordinary. The concussion is forcible, striking the tire and rim between the spokes, the tire binds so closely on the rim. When the rim once gives way, the draw of the tire holds it in that position—it has not sufficient strength to force the tire back to its original place. It may be asked, how is it? The nearer the rim becomes to the centre it shortens the circumference, which is correct. I have seen and repaired wheels that the rim had settled at least one-fourth of an inch between every spoke. In order that I may be understood, we will suppose that from one spoke to the other we will strike a straight line. Now, the question is, what becomes with this shortening or the contracting of the circumference of the rim? It will be borne in mind that when the wheel is burdened with this unnecessary draw of the tire, and the rim gives way to concussion, when under these circumstances the rim does not lengthen immediately under the tire, *as is the case when wheels are correctly hooped*, but it shortens, or more properly speaking, it jams up on the inside, forcing a ⅝ tenon as across the tread to ½ inch. But should your tenon be too hard and dry, the rim checks on each side of the tenon; in either case, the proof is apparent, because the felloe buckles or kinks on the face and back opposite the spoke, but seldom breaks immediately under the tire.

The reader may not at the first reading comprehend me correctly. If so, I will ask of him to examine for himself, holding the above points as his guide for investigation, and he will agree that in the main I am correct. I thus believe, for the reason practical and scientific investigation has dictated to my mind the facts as above. I have, since the meeting of the first delegates in New York to organize the first international organization of coach-makers on this continent, paid especial attention to the scientific skill requisite, that I might, as near as possible, become master of my business; and the more I investigate, the more I find to investigate. It was there, in the formation of that organization, that the LAW was made. The necessity became more apparent with the discussion upon this LAW, viz: the propriety of issuing a trade journal through which a practical and scientific interchange of opinions might be disseminated throughout the entire trade; the result of which is apparent when we compare No. 1, Vol. I. with Vol. V, No. 6.

HOOPING WHEELS.

(*Continued from page 88.*)

I wish to continue my remarks on hooping wheels; but, in order to do this, I must describe how the wheel should be made to receive the tire.

There has been a great deal said in regard to the right and wrong way of making wheels, and fitting them for the tires, and the position the spokes should stand in the hub to combine strength and durability; and also how they should be marked on the felloes—whether they should be shaved off so they will stand at an equal distance in the felloe, or whether they should be marked on just as the spokes naturally stand in the hub. Some regard these as minor points, but I look at them as very important ones, which all smiths and wheel-makers, and also carriage manufacturers, should take into consideration, throwing aside all notions and prejudices, and be dictated by philosophy and reason.

The experience I have had in putting up wheels is superior, perhaps, to what most of smiths have had, having had the oversight of making and watching the results of different experiments made when putting the tire on, and watching the effects when the wheels were in use. In saying this, I do not claim that I can make as good a wheel as the wheeler. Neither do I claim to know which is the best way to cure the hub, but I do know that it ought to be perfectly dry, or the bands will fall off, and the hub shrink to the box so that it will split open, and let some of the spokes loose. The best timber for hubs that grows in this country is elm, for two reasons: the ends of the grain are stiffer and sharper than that of birch or any other timber. Birch is too smooth and glassy. There is no timber that clings to the spoke as well as elm; and, again, the elm is less affected by changes of weather; and when the spoke is driven into the hub, the end of the grain bends a little down, so that in very dry weather if the spoke should shrink a trifle, the ends of the grain being bent a little will tend to straighten and cling to the spoke, and still hold them firm in the hub. The hub should be taken from a small tree, for the reason that a tree that is large enough to quarter the hub will not be round when it comes to shrink, and is liable to be more soft on one side than the other. Spokes should never be set dodging in the hub for two reasons: first, they carry more mud; second, we lose a great part of the strength of every other spoke. To illustrate, we will place a wagon on a side hill. When under the pressure of a load, the back ground spoke will act as a brace without much of the assistance of the front ground spoke; and as the wheels are pressed over by the load, it will tend to pull the front ground spoke out of the hub. And in case the wheel breaks down, the back ground spoke will break, while the front one will pull out; and, at the same time, if the top part of the wheel breaks over, then the back spokes will tend to pull out, and the front one break. Again, if all the spokes are set in a row, the ground spokes would all break before the wheel would go down. The dish of the wheel imparts strength, and the tires holding it there the back spokes are forced to hold three-fourths of the strain, acting as a brace, robbing the front spokes of a share of their part of the burden, thus losing one-fourth of the strength of the wheel by setting the spokes dodging. A spoke standing up straight in the hub, gives only the natural strength of the spoke, losing nearly all of the advantage the tires are intended to impart. The taper of the tenons should be taken or given on the back side of the spokes.

The best dish to give is ¼ inch for the forward, and the hind wheels as much more, as the spokes are longer than those in the front wheel. (In speaking of the timber for hubs, I should have mentioned that *red elm* is superior to all others.) In marking on the felloes, they should be laid on the tenons of the spokes, and marked just as they naturally stand in the hub. They should never be spaced on, for the reason that if one or more spokes should have to be sprung side-wise to enter the felloe; in that case, the spokes are sprung before the tires are put on. When the wheels have been hooped, the most of the strain will center on the weakest points, which are the spokes that have to be sprung in order to make them equi-distant in the felloe. A crooked or bowing spoke should never be driven with the bow part to the front, it being an erroneous idea that the tire will draw it over and straighten it.

In drawing out the felloe for the tires, care should be taken to saw them so that the chin of the felloe strikes first, leaving an open space in the felloe on the tread to the thickness of a saw-curf. If the joints are made tight, both in the chin and tread, when the tires are put on the chin will open; whereas, if left as above stated, will only bring them to a perfect joint, producing a serviceable wheel. The weld should be placed opposite a spoke for two reasons: first, the welds are more liable to be brittle through heating the tire in the operation of uniting the ends of the tire; second, to avoid putting a bolt through the weld, also the strain they are continually subject to between the spokes.

We come now to setting the boxes. The box should not be so placed that the ends of the spokes should rest on it: first, because it prevents trueing the wheel by wedging the box; second, if the spokes should become loose in in the hub, resetting the tire would not tighten them; and should the hub shrink a trifle, it would leave the shoulders standing above the hub, thus destroying the purpose for which they were designed. H. D. F.

For the Coach-Makers' International Journal.

Mr. Editor:—I do not know that I have anything new to offer the craft, but I would like to differ (or at least I do differ) with the communication of H. D. F., in Vol. V, No. 5, on "Hooping Wheels." We are told to cut our tire off 1 inch longer than the wheel calls for. Is it intended to give 1 inch on the inch felloe, and only 1 inch on 1½-inch felloe? If so, I think one will be too long, or the other too short. They may say that the smith must try it first with his traveler to see that it is right. A tire for 1½-inch felloe should be at least 7-16, and 1 inch would be too short. So you see that I don't think it a practicable rule or safeguard to work from.

What experience I have had on hooping wheels, is to allow twice and a half the thickness of the tire, and then upset and scaff. It is best to upset the tire, and I think that most smiths will agree with me, for oft-times in the first heat it does not weld, and you will have to take the second heat; then your tire becomes thinner in the weld than the rest part of the tire. In regard to the dish of wheels, friend H. D. F. said, a straight wheel is when you can lay your straight-edge on the face of the felloe, and touching the face of the spoke. I must beg to differ, then; for the face of the spoke, supposed to be straight or plumb, or so intended by the wheeler, then the felloe must overreach the face of the spoke, as a general thing, ⅛ of an inch, so the straight-edge must leave the face of the spoke ⅛ of an inch to be a straight wheel. If touching all three points of the face of the wheel, it must dish back that is, the spokes are driven back of plumb, and he says we are to be governed by the hardness or softness of the timber, and the open of the felloe. There is not hardly a smith, or I will say a practical smith, that is a judge of the timber, and most especially when there is a coat of paint, or oil and lead, on the wheel, as in that condition they come in the smith shop, for the reason, if not painted, the water that is put on the tire gets on the felloe, and raises the grain of the wood, giving the painter a great deal more work; and, if not painted, the water penetrates the wood, the felloe remaining damp. Take a set of wheels, the material all of one class, and all made alike, with the same open, and give your tire the same draft, nine times out of ten they will not be dished alike.

Now, is it in the timber, the make, or the tire, that they do not dish alike? If the smith will lay his straight-edge across the face of the wheel, then take the try-square, laying it on the edge of the straight-edge, and on the edge of the felloe, he will find one edge of the felloe the highest. If the front edge is the highest, it dishes the more, because the tire draws most on the highest edge. Then, if two wheels of the set are highest on the out edge, and the other two the highest on the back edge, it will be found difficult to dish all the wheels alike; for, in the attempt to give them a uniform dish, the spokes will be sprung. We often hear the complaint made, "Those wheels dish too much." The smith will say, I gave them the same draft and they were open just right, and he can't tell the reason, but if he will use the straight-edge he will find it. In welding steel tires, or steel axles, many smiths are timid, or lack confidence in themselves, and therefore fail to produce good work.

Some, in welding steel axles, scaff and punch holes in the scaff, and then rivet the two together. In welding steel axles, let the smith scaff his axle, making his scaff little hooking, then put them in the fire, get them just red-hot, sprinkle a little borax on them, lay them in the fire carefully until the borax begins to run, take them out and sprinkle iron filings from the finisher's bench on the scaff, the whole length of the scaff—if $\frac{1}{8}$ of an inch thick no harm—lay them in the fire, scaff up, until the filings are red-hot, then sprinkle on a little more borax, lay them in the fire, cover them over with the fire, and run the heat the same as a borax heat, take them out, not knocking the dirt off of the filings, drive the dirt off, put the scaff together and it will weld the same as iron; in fact, it becomes iron. The first borax opens the seams of the steel, then the iron filings penetrate the steel. The same can be applied to steel tire. Yours, truly, S. W. R.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 89.)

The time allowed for filling in a coach body, as laid down in the preceding number, may be extended as far as circumstances will permit. We do not think, however, there is any positive gain in the wearing of the foundation coats by allowing weeks to intervene between coatings. When a coat is hard, it is ready for another; and it is far better to have the body filled and set aside, than to divide the time between coatings, and probably be compelled to rub out the body before the last coat is firm. The English method of using a large proportion of oil, would require considerable time for each coat to harden; but as our practice is so different, there can be no necessity for it. The first coat of rough stuff should be applied somewhat thinner than the others, and, in some instances, would be improved by being mixed with one-half white lead. It should also be made more elastic than the succeeding ones, as it will then take a firmer hold on the "dead" lead coat over which it is placed, contributing a portion of its elasticity to that coat, and also cling more firmly to the hard-drying coats which follow.

The first coat should cover every portion of the lead surface; be well brushed in, yet not allowed to lie on heavy along the mouldings or in the corners. It should be fine, and laid on smoothly, as it is better in rubbing out to leave on as much of it as possible. The remaining coats should be applied reasonably heavy, laid off level, and kept from lapping over the edges, or rounding the sharp corners, thus destroying the sharp, clean lines given by the body-maker.

Any defects noticed, while filling in, should be puttied; ever keeping in mind that the perfection of finish aimed at is secured only by care at every step taken. The guide coat is a mere stain, put on thin, and intended to assist the rubber in detecting the unevenness of the surface.

The body having been filled in, may be set aside to harden; or, if the smith is ready for it, now is the best time for him to take it, as any dents, burns, or other mishaps, may be remedied without being detected. When it has returned from the smith shop, examine it closely. If there are any bruises, putty them; any burned places which will show, scrape the paint off to the wood. Prime the bare spots, and putty and fill them as well as time will allow. The rubbing or leveling should be in the care of an experienced man. Mouldings should invariably be rubbed out before the space surrounding them, (to prevent cutting a "gutter" or groove along the panel,) and corners and narrow spaces before the adjacent surface.

Use English rubbing stone for the main part of the leveling, finishing off with pumice stone. It is preferable to begin on top, and follow on down, so that the filling water may not run over and dry on any part that has been finished. Water should not stand for any length of time on the inside of the body; and when the rubbing is completed, wash off clean outside and in, drying off with a "chamois" kept for the purpose.

The body, when dry, is to be carefully sandpapered with 0 or No. 1 sand-paper, the corners cleaned out, and a coat of dark lead put on. When dry, scratch over the lead with fine sandpaper, which will make the lead appear of lighter color; the low places will then be apparent, for they will show dark. Putty up any imperfections with putty, mixed of lead and varnish, and when dry, face down with lump pumice and water; follow with fine sand-paper, when the surface will be in condition to receive the color coats. The coat of dark lead may be omitted, and the color applied immediately to rough stuff; but as a coat of lamp-black or drop-black must be substituted, we think advantages are in favor of the lead coat.

The colors are to be ground very fine, kept clean, and spread on with camel-hair motlers, (blenders;) sizes ranging from one inch up to three inches. If the panels are to be painted different from the other parts, lay on the black first; for if any black falls on the panel color, it occasions some trouble, and will sully the purity of a transparent color. By repeatedly turning the brush over, there is less liability to accidents of this kind. Each coat of color should be haired down. Two coats, and color and varnish are sufficient for opaque colors, and the same for those that are transparent, if we do not count the ground-work. Each coat of varnish should have not less than three days to dry—four or five days would be better. The first coat of rubbing varnish may be applied thinner than those following (when color and varnish has not been used) to prevent staining the colors. When the first coat has been rubbed over lightly, the mouldings or edges, separating the panels, may be blacked. The black should be glossy by the use of varnish; this is to bear up the second coat of varnish over the mouldings.

The pencils used on mouldings should be large enough to cover them at once, and the color run on, avoiding laps, except at or near the corners. When the mouldings are dry, the body is to be washed off clean, and the second coat of varnish spread on. Avoid the use of turpentine if possible; but if the varnish is heavy and dark, the amount of turpentine introduced sufficient to make it flow pleasantly, will not injure it. The half elastic and fine bristle brush are better adapted to the working of heavy varnish than the sable or badger. In varnishing a coach, you may begin on the roof, bringing the varnish to within two or three inches of the outer edges. Next, the inside of doors, &c.; then the arch. When these are completed, start on the head-rail on one side, lay the varnish on heavy, and follow quickly to the quarter. The edge on the roof, which was skipped before, is to be coated and finished with the outside, thus preventing a heavy edge. Continue around the body, finishing the boot last.

The frames, and other loose pieces about a coach, should be brought along with the body, and not *slighted*, as is too often the case. The frames are most conveniently handled by the use of a device made similar to that which secures a swinging mirror—a base and two uprights, stoutly framed together, allowing space for the frame to swing. It is held in position by two pointed iron pins; one stationary, the other moveable, which is made of ¼ or 5-16 round iron. One end bent, forming a crank; a thread cut on the axis, which must work in a washer the same as a bolt and nut. One side of the door or glass frame is pressed against the stationary point, and the other side screwed up until it enters the edge on that side, holding the frame securely.

While varnishing, the painter may examine his work, and set it any angle, either to detect dirt, or have the varnish correct a tendency to flow out of corners, &c. When a frame is finished, it may be set aside, and another inserted. The different rubbing coats are applied in about the same manner, and upon them depends the whole beauty of the finishing coat. If the former are wavy, from not being leveled down, or contain runs and grit, the finisher will despair of producing a perfect finish; in fact, the last coat will only bring out more distinctly all imperfections.

"Well, then," we hear you say, "how shall we lay on the rubbing coats, and how level them, and remove waviness and runs?" The question is more easily asked than answered, for it is difficult to write down that which is acquired only by years of practice. We will, however, make the venture, first stating certain points:

1st. The varnish should not be patched on.

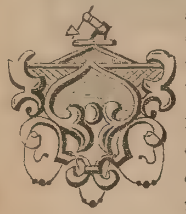
2d. On all large connecting surfaces, more varnish should be applied than it is intended to leave on.

3d. When a narrow space connects with a larger panel, the whole must be completed together.

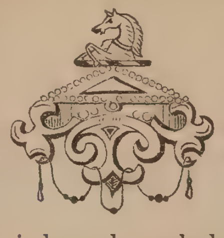
4th. The varnish should be brushed "up and down."

5th. In rubbing or leveling, all brush marks and faults must be corrected.

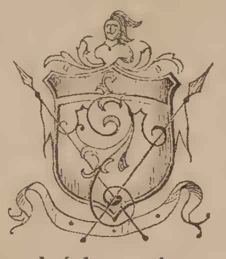
Ornaments.—The accompanying original designs are intended for small panels or spaces.



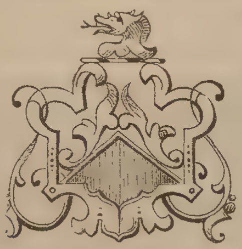
No. 1 is of a triangular form. Lay in all gold, and over this use colors, distributing them according to your taste. The gold will best define the scrolls and right lines; colors to be used on the inclosed spaces. The crowning space to be red; the upper left-hand space white, its opposite blue. The first to be filled in with perpendicular lines, as shown in the engraving; the others by cross-barred lines of the color suited to the respective spaces.



No. 2.—This pattern may also be laid in in gold, except the crest, which paint a warm gray, shaded with raw umber, and lighted with white. The space bounded by the upper scrolls to be lined with pink, mixed of carmine and white. This space should not be gilt. The small circles or drops shaded with a light green, the centres touched with a spot of white.



No. 3.—The armor, gold; the plumes, crimson; leafing at the base, pea green, touched up with white; shades, verdigris; outline of shield and lower field, gold. The upper space lined as engraved, using light blue (ultramarine and white) in the middle, and shading off into each corner with purple (ultramarine, carmine and white.) Lance heads, gold; flags, crimson; scrolls across face of shield, brown, lighted with orange; flying ribbon at the base, pea green, shaded with verdigris.



No. 4.—An odd yet pretty pattern. It is drawn within a square, 1¼ inches in diameter, making it suitable for small spaces and panels. Lay in all gold, and introduce colors on the crest, the triangular field at the base, and the fine scrolls which are at the sides.

These small patterns are neat, and will, when delicately executed, produce a pleasing effect.

Mr. Editor:—Will you please give me a better plan than mine for preserving varnish brushes when not in use? I keep mine in varnish and turpentine, and paint brushes in water. If there is any better plan, I would like to know it. A Subscriber.

Answer.—We prefer English varnish to keep varnish brushes in, or the highest grade American finishing. Turpentine added to it will not benefit them in the least; oil would be by far the best. The object should be to suspend the brushes in a liquid which will not skim over on top, and yet be as near the nature of the finishing varnish as possible. Raw linseed oil alone will weaken the hairs or bristles, and an excess of turpentine makes them brittle, causing them to break off.

Ordinary paint brushes are generally kept in water; they should be suspended by the handles, the water to cover only the bristles. Lead brushes to be kept in tubs separate from those used for color; and color brushes wrapped with paper or muslin to prevent them from soiling each other.

Camel-hair motlers, used for coloring bodies, retain their life or spring somewhat better when kept in turpentine. During the winter it is less troublesome, as it will not freeze. Otherwise water will answer the purpose.

Topeka, Kansas, March, 1870.

Mr. Editor:—Will you please inform us what is the cause of finishing varnish cracking over night? The cause, in my opinion, is the cold. Put on late in the evening, it gets chilled through during the night, and contracts, forming cracks. Reasons have been given in the Journal for crawling, pitting and enameling, but none for cracking. Yours, J. L.

Answer.—In the letter to us, you mention that it was an American finishing varnish which you laid on late in the evening, and that the undercoats were sufficiently dry, but that in the morning the varnish was cracked. Now, if the undercoats were firm, and no japan or other driers were added to hasten the drying, we can conceive of no other agent, except extreme cold, which would occasion the cracking. We know, from actual observation, that if a board is coated with the best finishing varnish, and exposed to the weather, it will not crack during warm weather; but after the heavy frosts of winter, and the rain freezes on it, fine cracks will make their appearance. A carriage when washed in freezing weather, if the water freezes over the surface, it will crack and scale up the varnish. But a body finished in a regular carriage shop, where it is supposed there would be a temperature much warmer than the outside atmosphere, should not certainly be subject to a test such as is stated above with reference to the board hung outside. If the varnish room was suffered to become cold enough to chill the varnish to that extent, there should be means employed to warm the room, and keep it so during the night. No blame should be attached to the varnish maker under such circumstances.

SHEARS, NEEDLE & TACK HAMMER

T. ACKS EDITOR

METHOD IN THE TRIMMING SHOP.

Without a system of some kind, it is impossible to conduct any business in a correct or economical manner. To do business right, a *method* must be adopted. Some rule or set of rules laid down by which you should be governed in your business relations, and which rules could be understood by those doing business for you, whether as a merchant, a manufacturer, a foreman, a superintendent, or as a plain journeyman. A system will be of advantage, and will eventually tend to simplify and render easy that which has otherwise been difficult and troublesome. And in our trade, how necessary it is that workmen should adopt a given routine in their daily round of duty. Whether as piece workmen or as day workmen, this will be found advantageous.

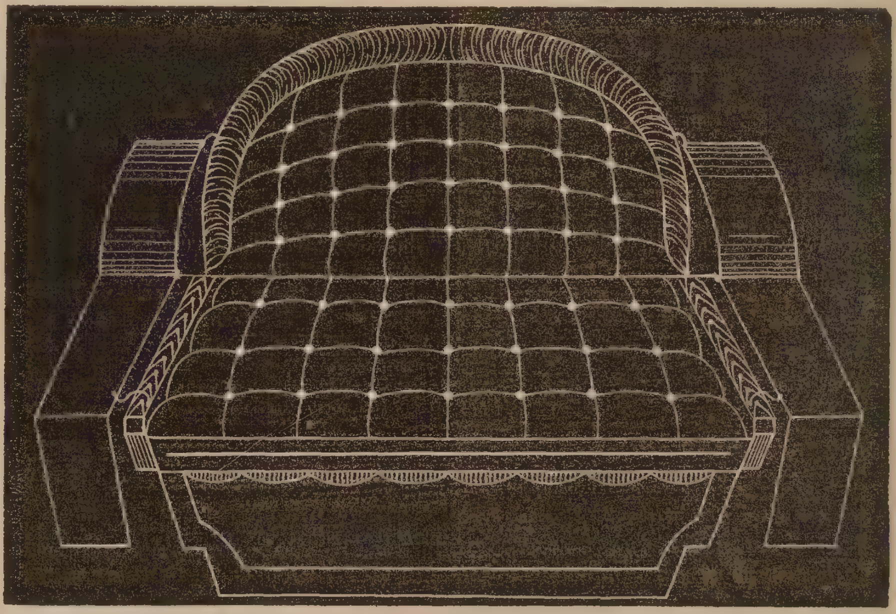
Now, take two men, equally matched as to speed, on a job. One of them does everything by guess or chance. One time he will commence at this end of the job, (to trim;) at another time, he will commence at the other end; his tools are scattered about his bench in happy confusion; he has only a very indistinct idea of where anything he may need can be found; and when he gets in a hurry, (he is seldom out of one,) it is worrying to see him and hear him. He rushes from his job to the bench to look for some tool he needs, but in the litter he cannot get his eye on it. He frantically turns everything over, and cannot find it. Perhaps it dropped on the floor or under the bench. Down he goes on his knees to the floor. Can't find it. He ducks his head under the bench—*it ain't there.* He tries among the litter again—it is not there. He sings out, in a fretful manner: "did any one take my claw-tool?" No one took it, and back he rushes to his bench again, and takes another GOOD look. This time he (perhaps) finds it. He grabs it up, makes a dive at the nail he wants to draw; but he has lost so much time hunting up the claw-tool, that he does not take time to do it right; and ten chances to one but he digs the top of his finger off, or instead of drawing the nail he punches his finger nail off, and slaps down the offending tool, sticks his injured finger in his mouth, and PRAYS. And thus he goes all the way through; always in a flurry, always anxious, always on the hunt for something mislaid or forgotten; alternately losing and finding, and changing off to a *swear.*

Now, the man alongside of him has a much easier way of getting along. He has no trouble about trying to remember where he left his tools, or where this or that article is. He has no rushing to look for this or that; no diving under the bench, and raking up the scraps for lost things; no pettish queries as to who has this or that tool, or where is this or that tool? No such a thing. *He* has no need for any trouble, simply because he knows where every article can be found. He can always lay his hand on anything he wants to use. And how does he do it? Very easily, because he has a "place for everything," and he takes time to have "everything in its place." But you say there would be too much time lost in stopping to put everything in its place. *I say no such a thing.* The time lost by the careless *no-method man* in hunting up his stray tools is greater by far than is lost by the methodical workman in keeping his traps conveniently handy, not to speak of the worry and annoyance saved by having things where you can find them. And then, again, in the *method* or *routine,* or want of either, evinced by each. Now, the careless man is always forgetting to paste out this or that part of his job until just when he happens to want it; then he rushes it through, dries it at the stove in a hurry, and while he is doing something else in an equally big fluster, he is reminded of the piece he left drying behind the stove only when he smells it burning. And thus he goes, always in a hurry, always in trouble; and he really does not get on as fast as our placid man of method, who never allows himself to be put out, and who has a system or order which he follows on each job. He begins with a certain part, and follows it up all the way through the job. Remember, hurry is not speed.

PARK PHÆTON SEAT, WITH SQUARE CORNER WINGS.

Trimmed with Blue Cloth and Blue Morocco, and Blue Morocco Covered Buttons.

This is something new, both in material and style; it looks very well. The back and cushion top is made in squares with blue cloth, also the fall; but it has a morocco welt pasted on, 2¼ inches wide from the edge, (as shown in drawing;) the outer edge bound with a turn-over welt of patent leather, as also the scolloped piece on top of the fall. The cushion facing is of morocco, with rubbed-down welt pasted on the centre, (as shown in drawing;) patent leather seaming welt all the way through the job. A wrinkled roll of morocco around the top and both sides of the back, and may be carried to the front pillar on the top of the low arm piece, (or duster,) or else finish this low arm piece with the old (new) herring bone style, as shown. Carpet to be blue, with a crimson border, about 4 inches in width, all around it. Bind the edge very wide with patent leather. Patent leather rocker covers, with two rows of stitching all around. Make the front facing for the cushion 2½ inches high when finished. The dash to be covered double, and without a flap; but bind the edge of dash all around, as also the edges of the wings with patent leather. The cushion straps to be ⅞ of an inch wide, and covered with morocco. Buckle them in front in place of knobbing them on as some do; also, remember to blind nail the outer edge of the rocker covers, leaving binding edge loose for that purpose, and stitch leather to the inside edge. You will then have no nails to show at all. In this class of work it is necessary to finish very neatly, therefore be very careful to have no *black head nails,* or any other kind seen; if you do, you will mar the general effect of your work. The stitching should be done with silk, for thread will very soon turn gray, and look faded and shabby. The stitching on the dash should be carefully done, and not less than 12 or even 14 to the inch.

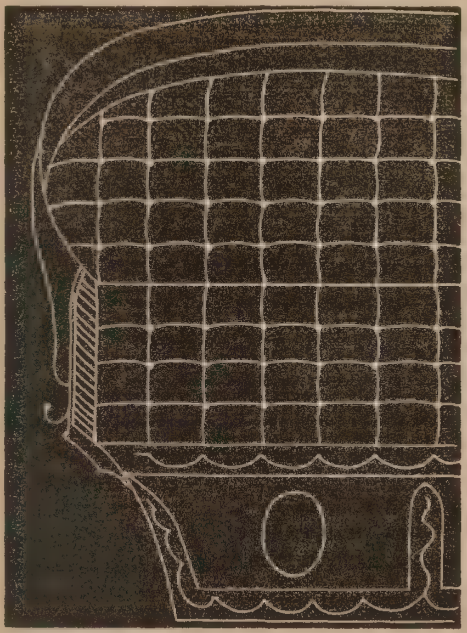


BUGGY SEAT AND FALL.

The accompanying cut represents a portion of a buggy seat and fall. The upper roll: enamel leather; width: 1¾ inches. The lower roll of bow leather; width: 1¼ inches. The back and seat of enameled leather; biscuit work in 3-inch squares. Bow leather, fall and cushion front, with "new moon" raisers and oval centre piece. This will make a very genteel appearance, and although not essentially different from the prevailing styles, will serve its purpose in this department.

It was furnished by one of our subscribers, who is a skilled artisan in his line, and for the interest he manifests in the spread of information, he has our hearty thanks.

In this department there is not so wide a field for design, which tends to make it uninteresting when compared with the other branches. Still we think that trimmers possess a great many little secrets of doing work, and originate many new things which would be valuable if published. T. Acks' invitation has been repeatedly given, cordially inviting his brother trimmers to aid him in his department. It is often the case, that a man working in a country town, far from the great carriage-making cities, may originate something, which, if published, would be copied in the cities. Genius, does not dwell with the city mechanic alone, although we must admit that the incentives are greater, because of the variety of styles witnessed, which suggest other variations.



Remedies and Receipts.

To Clean a Gold Chain.—put it in a small glass bottle, with warm soap suds and a little prepared chalk; shake it well, rinse in clear cold water and wipe on a towel.

Razor Paste.—Take putty powder, 1 oz.; oxalic acid, ¼ oz., and honey enough to mix with these so as to make a stiff paste; apply it to the strop, and wrap the remainder in tin foil.

Painter's Colic may be warded off by using sweet oil at the table. Americans are not in the habit of using it, but may soon learn to lay by their prejudice and relish its flavor on salads.

Roaches.—Powdered borax sprinkled around through the cupboard and other places where roaches congregate will remove them entirely. It is perfectly harmless, and therefore preferable to arsenic or other poisons.

A Delicate Dish for Breakfast.—Beat two eggs to a froth, take cold mashed potatoes, stir them into the egg in sufficient quantity to make a batter about the consistence of cup cake. Season to the taste with salt and pepper, and fry in butter—a spoonful in a place. Serve hot.

Varnishes for Maps, Charts, &c.—Two parts of spirits of turpentine, with one part of Canada Balsam, when thoroughly mixed, make a very good varnish when the paper has first been sized over with a solution of gelatin in water, to prevent the varnish from striking through.

Those of our readers who have house plants which they are compelled to keep in rooms not sufficiently warmed in cold weather to prevent their being frosted, will find a ready protection for them by throwing a single fold of newspaper over them. Shape the paper like a conical cap, and, if possible, let the paper touch the rim of the pot outside.

To Cook Vegetables.—A German professor says, that if one portion of a vegetable be boiled in pure distilled, or rain water, and another in water in which salt has been added, a decided difference is perceptible in the tenderness of the two. Vegetables boiled in pure water are vastly inferior in flavor. This inferiority may go so far in the case of onions, that they are almost destitute of either taste or odor. Water which contains one-twentieth its weight in salt, is far better for cooking vegetables than pure water, because the salt hinders the solution and evaporation of the soluble and flavoring principles of the vegetables.

Scraps of Humor.

A skeleton wagon—the hearse of an undertaker.

"P'lice dont!" as the thief said to the constable when he was about to arrest him.

If a man carries his watch in his coat-tail pocket, he will always be ahead of time.

To stop advertising in dull times, is like tearing out a dam because the water is low.

Bismarck used to have three hairs on the top of his head, but has lately lost two of them.

A man who attempted to pinch a gas-light out, discovered that some one had stolen the wick.

Josh Billings says: "If a man haint got a well-balanced head, I like tew see him part his hair in the middle."

"Wouldn't you like to be a woman when you grow up, Tommy?" "No." "Why not?" "Because women can't turn summersets."

"Excuse me, madam, but I would like to ask why you look at me so savagely?" "Oh, beg pardon, sir; I took you for my husband."

At a negro ball, in lieu of "Not transferable" on the tickets, a note was posted over the door: "No gentleman admitted unless he comes hisself."

"Lenny, you're a pig," said a father to his little five-year old boy. "Now, do you know know what a pig is, Lenny?" "Yes, sir; a pig is a hog's little boy."

A Definition of Pride.—"What is pride, my dear?" "Walking with a cane when you ain't lame," said the little four-year-old to whom the query was propounded.

A sporting man remarked of a belle, in the habit of wearing low-necked dresses, who carried off a matrimonial prize in the shape of a rich old widower, "that she won the race by a neck."

When an ill-natured fellow was trying to pick a quarrel with a peaceable man, the latter said: "I never had a fuss except with one man; he was buried at four o'clock; it is now half-past three."

"I don't think I can see to shave myself without a light," said Mr. Quilp to Mrs. Quilp, the other evening. "Oh, la," she replied, "I should think your face was plain enough to be seen anywhere."

An awkward man attempting to carve a goose, dropped it on the floor. "There, now," exclaimed his wife, "we've lost our dinner." "Oh, no, my dear," answered he, "it is safe—I have got my foot on it."

A sneering editor boasts that some time ago he advertised for a girl to learn the printing trade, who would wear pants and saw wood, and that not a single (or married) girl has yet answered the advertisement!

"Bridget, I wish you would step over and see how old Mrs. Jones is this morning." Bridget returned in a few minutes with the information that Mrs. Jones was seventy-two years, ten months and eight days old.

Miscellaneous.

Brewster & Co. Industrial Association.

CONSTITUTION.

Whereas, Messrs. Brewster & Co., of Broome Street, New York City, Carriage Builders, have proposed to their employees that at the end of each fiscal year, viz: on the first day of July, said firm will divide a sum of money equal to ten per cent. of their net profits in their Broome street factory and Fifth avenue warerooms, during the year then ending, among certain of their employees, in proportion to the wages earned by them respectively, and in addition to such wages, (the persons so to share in said sum to be determined by the employees of said firm,) and have also proposed that, in determining the amount to be thus divided, the members of said firm shall make no charge for their services, nor for interest upon the capital invested in their business, and that the business of each year shall stand by itself and be independent of that of any other year;

And whereas, the next fiscal year of said firm does not begin until July 1, 1870, but said firm have proposed to inaugurate the above plan as of the date of Jan. 1, 1870, and in July, 1870, to divide a sum of money equal to ten per cent. on one-half of their net profits in their said Broome street factory and Fifth avenue warerooms (to be determined as above mentioned,) for the year then ending:

Now, we, the delegates elected by said employees to confer with the members of said firm, with a view to adopting measures suited to the above proposals and calculated to promote the general interests of said employees, and to insure greater harmony among them, *do, on behalf* of said employees, *ordain and establish* this constitution for the "Brewster & Co. Industrial Association."

ARTICLE I.

There shall be a *"Board of Governors"* for the shop at large, and a *"Board of Control"* for each Department.

ARTICLE II.

Said employees shall be divided into seven Departments, as follows, viz:

Department Number One shall consist of the Heavy Smiths, Light Smiths and Finishers, each calling to be represented by one of its own members in the Board of Control.

Department Number Two shall consist of Wheelwrights and Carriage-makers, each to be represented by at least one of its own members in the Board of Control.

Department Number Three shall consist of the Jobbers, Cleaners-off, Filers and Platers, and and the first and second floors shall have two representatives, and the third and fourth floors one representative in the Board of Control.

Department Number Four shall consist of the Heavy Trimmers, Light Trimmers and Stitchers, and each shall be represented by one of its own members in the Board of Control.

Department Number Five shall consist of Heavy Body-makers and Light Body-makers, and each shall be represented by at least one of its own members in the Board of Control.

Department Number Six shall comprise the Body Painters alone.

Department Number Seven shall comprise the Carriage-part Painters alone.

ARTICLE III.

The Boards of Control shall have three memmembers each, who shall be chosen by the members of their respective Departments, one of whom shall be designated by the President of the Association as Chairman, who shall serve one year, (but the persons who shall serve as Chairmen of the several Boards of Control and as *ex officio* members of the Board of Governors for the year beginning on Jan. 1, 1870, shall be designated by the Chairman of the Delegates who have ordained and established this Constitution;) the remaining members of the Board of Control shall dertermine by lot the duration of their respective terms of office —one shall serve three months and the other six months. In case of a vacancy, an election for the unexpired term shall be held within a week after its occurrence, on the order of the Chairman of the Board of Governors.

ARTICLE IV.

The Boards of Control shall carry out and enforce in their respective Departments all rules and regulations made by the Board of Governors; and at each monthly meeting of the latter the Chairman of the Boards of Control shall report in writing the working condition of their respective Departments.

ARTICLE V.

The Board of Governors shall be composed of the Chairmen of the Boards of Control and the Representative of the shop at large, in Article VIII mentioned, and within one week after the members of the Board of Governors have been designated, as provided for in Article III; they shall elect one of their number as their Chairman, who shall serve six months as such, and while acting as Chairman shall have no vote except in case of a tie, and they shall choose their other officers, whose term of office shall be six months, also a Chairman *pro tempore* in the absence of their Chairman. They shall also, within one week after their organization, elect a President of the Association from among the members of the firm of Brewster & Co., and he shall serve one year and until his successor is chosen.

ARTICLE VI.

The Board of Governors shall assemble once in each month, or oftener, if the President of the Association or its Chairman shall so direct, or a majority of its members request it. Five shall constitute a quorum for the transaction of business. The Secretary of the Board shall receive a salary, the amount of which shall be fixed by the President, and by him be paid quarterly.

ARTICLE VII.

The Board of Governors shall have power to make rules and regulations for the shop.

Every Resolution or measure of any kind which shall have passed the Board shall, before it becomes binding upon the Association, be presented to the President; if he approve he shall sign it, if not he shall return it with his objections in writing, or with a verbal statement to the Board, at its next monthly meeting, and the Board shall then proceed to reconsider it; if, after such reconsideration, two-thirds of all its members shall vote to pass it, it shall become binding, notwithstanding the objections of the President; but in all such cases the vote shall be determined by yeas and nays, and the names of the members voting for as well as those voting against it, shall be recorded in the journal.

ARTICLE VIII.

The Board of Governors shall, within one week after its organization, elect as a representative of the shop at large, a member of the Association having a general knowledge of the business of the several departments, who shall serve six months as a member of the Board, and have all the rights and privileges of any other member of the Board.

ARTICLE IX.

All persons employed in the Factory shall have the right to vote, except clerks, salesmen, boys, porters, apprentices, cartmen and persons under instruction in any of the Departments; and all questions as to the status of any person or persons not directly employed in mechanical labor, shall be referred to the firm of Brewster & Co., whose decision shall be binding on the Association, and on all the Boards.

ARTICLE X.

A member of the Association to be eligible to any office therein must be twenty-one years old, a skilled mechanic, and have worked in the Factory not less than six months; and any question as to whether an employee shall be ranked as a skilled mechanic, or a laborer, shall be decided by Brewster & Co.

ARTICLE XI.

Neither this Association nor any member thereof, other than its President, shall have any voice or authority in the management of the business of Brewster & Co.; nor shall this Association, nor any member thereof, have the right to bring suit against the firm of Brewster & Co., or any member of said firm in any Court of Law or Equity, to determine or recover the amount of any share or shares in the moneys mentioned in the preamble of this Constitution; *and it is expressly understood* that the wages agreed to be paid by Brewster & Co., shall be full compensation for all services rendered by any member of this Association while in the employ of Brewster & Co.

ARTICLE XII.

Any member who shall voluntarily leave the employment of Brewster & Co., (when full employment is offered by them,) before the close of any fiscal year, without the written consent of said Brewster & Co., shall receive no share or portion of the moneys mentioned in the preamble of this Constitution, but the share of such moneys proportioned to the wages earned by said member during said fiscal year, shall be paid into the Treasury of the Benevolent Fund to be hereafter established by the members of this Association.

ARTICLE XIII.

Any member who may be discharged from the employment of the firm shall, notwithstanding such discharge, at the end of the fiscal year, receive the share of the moneys, in said preamble mentioned, proportioned to the wages earned by him during said fiscal year, provided such wages amount to the sum of two hundred (200) dollars; and all shares in the moneys, in said preamble mentioned, not called for within six months after they are declared, shall be forfeited and paid over to the Benevolent Fund.

ARTICLE XIV.

This Association may be dissolved at the close of any fiscal year after July, 1870, or within thirty days after such close, either by Brewster & Co. or by a two-thirds vote of the members thereof, taken by tellers appointed by the Board of Governors.

ARTICLE XV.

All persons employed in the factory and salesrooms of Messrs. Brewster & Co. shall share in the moneys mentioned in said preamble ratably, in proportion to the wages earned by them respectively, excepts heads of departments and contractors who realize a profit on other labor than their own, and such other persons as shall have an interest in their business through private contract with the firm; but these exceptions do not include smiths who employ helpers and finishers to aid in the work of one fire; in such cases, the wages earned by their employees shall be deducted from the amount paid to them by the firm, and the balance shall be considered the wages of their individual labor.

ARTICLE XVI.

All fines imposed and collected under the By-Laws of this Association shall be paid over to the Benevolent Fund, in Article XII mentioned.

ARTICLE XVII.

All complaints against the working management of any department shall be made by the President to the Chairman of its Board of Control, and, if such complaints are not properly heeded, and a remedy applied, he shall then report the matter in writing to the Board of Governors for action.

ARTICLE XVIII.

All charges against officers of this Association, (except the President,) of neglect of duty, or violation of any of the laws or regulations, must be made in writing to the President, who shall lay them before the Board of Governors, and within ten days thereafter, (unless a regular meeting is to take place within fifteen days,) the Chairman shall order a special meeting of the Board to investigate the charges, and the accused shall be summoned to appear before them in his defence. If adjudged guilty, the Board may remove him from office, or inflict such a fine as in their opinion would be just.

ARTICLE XIX.

Any member of this Association, other than officers, who may violate any of the laws or regulations of the shop, shall be complained of to the Chairman of the Board of Control of his Department, who shall investigate and report the facts as ascertained to the President, who shall take such action as the case may seem to demand, or refer it to the Board of Governors, as he may elect.

ARTICLE XX.

Any member of this Association, who shall make a false and malicious charge against a fellow-member, affecting his standing as an employee of Brewster & Co., shall, upon good and sufficient proof, be fined or dismissed from employment by a vote of the Board of Governors.

ARTICLE XXI.

The terms of office of those first elected as officers, either of this Association or of any of its Boards, and the official terms of the members of said Boards shall be deemed as beginning on the first day of January, one thousand eight hundred and seventy, and all officers and members of the Board of Governors, and of the several Boards of Control, shall hold over and continue to serve as such officers and members until their successors are respectively appointed or chosen.

ARTICLE XXII.

The foremen shall exercise authority in their respective departments, in behalf of the firm, when no member of the firm is personally present.

ARTICLE XXIII.

A proposition to amend this Constitution must be presented by the Board of Governors to the President; and, if he approves, a copy of the proposed article or articles shall be posted in each department for a period of ten (10) days, after which the Board shall proceed to vote upon it; and, if two-thirds of all the the members thereof shall vote in favor of it, it shall then become a part of this instrument.

JOHN D. GRIBBON, THOMAS SEDGEWICK,
ALPHEUS E. FERRIS, SAMUEL LYON,
EDWARD ROWE, HENRY S. WHITNEY,
JOSEPH F. SCANLON, RICHARD COLEMAN,
JAMES HAGGERTY, JACOB KRUMMENAUER.

◆

IT IS said the clergy cost the United States $12,000,000 per annum; the criminals $3,000,000; the lawyers $70,000,000; and rum $200,000,000.

A MAN in Leavenworth went out to drown himself, but met another who called him a liar. That saved his life, for the thrashing he got, in attempting to correct the false impression, put all thought of death out of his mind.

A LARGE tin sign in Detroit, representing a gold pen, was recently torn from its fastenings by the wind, carried up into the air, and, descending, its point penetrated the back of a dog, killing him instantly.

MAN is like a snow ball. Leave him lying in idleness against the sunny fence of prosperity, and all the good that's in him melts like butter; but kick him around, and he gathers strength with every successive revolution, until he grows into an avalanche. To succeed, you must keep moving.

A BULL-SNAKE was killed in Henry county, Illinois, recently, eight feet six inches long and one foot around. In the same neighborhood, a man noticed that a young cow came home for awhile already milked, and, lying in wait for the thief, he discovered one of these snakes sucking her, she appearing to take it as complacently as if it were her calf.

IN AN old house in Danbury, Ct., the other day a well-preserved note was found, issued under the act of Congress, Feb. 17, 1776. It was for "one-sixth of a dollar." One side, among other things, was the motto, "Mind your business," and on the reverse side a circle composed of thirteen links, representing the thirteen States.

AT Syracuse, N. Y., recently, a young wife stood at a door bidding adieu to a friend; her husband saw her, and thought he would give her a little surprise; so he crept up behind her and suddenly imprisoned her in his embrace. The terrified lady shrieked, and went into convulsions. A physician was called, who said that the lady was in danger of becoming a maniac, by reason of the shock which her nervous system had sustained. Since that time she has been dangerously ill, but is now recovering.

SUNKEN LAKE, in the Cascade Mountains, is one of the greatest curiosities in Oregon. It it ten by twenty miles, and seems like a gigantic well scooped out in the heart of the mountains. The walls are nearly perpendicular, average two thousand feet in height, and run sheer into the water, leaving no beach at all. The lake is never ruffled by the wind, and its depth is unknown, as thus far no person has been upon its surface.

WE have a good fish story from Maryland. As it runs, a man fishing in a river in that State found that his hook was attached to something, and pulling it up with some difficulty, found at the end of his line a jug holding about half a gallon. Not wishing to lose his only hook, he demolished the jug, and to his great astonishment found that the hook had been swallowed by a cat-fish exactly the size and shape of the jug.

Periodicals.

THE PHILADELPHIA EVENING STAR is a little penny paper that is fast obtaining notoriety all over the country as the most spicy and progressive daily in this city.

ZELL'S POPULAR ENCYCLOPEDIA, monthly part 24, closes with the word "Frigate Bird." Every carriage-maker should subscribe for it. Sample copies, 10 cents. Address, "Office of Zell's Encyclopedia," 17 & 19 South Sixth St., Philadelphia, or any of his agents.

THE AMERICAN BUILDER is devoted specifically to the building arts. It is a handsome work, and contains besides numerous designs, and their full description, reading matter of general interest. Price $3 a year. Address, Charles D. Lakey, publisher, 113 & 115 Madison Street, Chicago.

AMERICAN ARTISAN is received regularly. A late number gives us "Fusion of Metals under Pressure," "Electroplating with Nickel," "Gibbs' Patent Hub Mortiser," "How to Rig a Grindstone," &c., among the many articles of value. $2 per annum. Address, Brown, Coombs & Co., 189 Broadway, N. Y.

THE INDEPENDENT, for Thursday, March 17th, has come to hand, and right welcome are its weekly visits. Those desirous of obtaining a first-class family paper, can do no better than to subscribe for "*The Independent.*" See our clubbing rates, and the handsome present offered to new subscribers. Address, Henry C. Bowen, publisher and proprietor, box 2787, New York City.

PETERSON'S LADIES' NATIONAL MAGAZINE, for April, has been received. The steel engraving, "Eyes Right," is very good. The colored steel fashion plate is excellent. "The Secret of Bertram's Holme" is brought to a close in this number. "The Prisoner of the Bastile" is continued. The other stories are by the best writers in the country. Terms, $2 a year, with great reductions to clubs. Address, C. J. Peterson, Philadelphia, Pa.

PHRENOLOGICAL JOURNAL and PACKARD'S MONTHLY.—With the April number we have the consolidated work. The following are selected from its contents: "Thos. H. Shelby, Mayor of San Francisco, with portrait," "Mental Requisites of the Artist," "Philosophy of Faith," "Henry Bergh, the Philanthropist, with portrait," "The Dust in the Air," "Capital *vs.* Labor," "S. S. Packard, with portrait," "Prayer and Phrenology," &c. Price 30 cents, or $3 a year. S. R. Wells, publisher, 389 Broadway, New York.

SCIENTIFIC AMERICAN.—The last number, dated March 19th, begins its table of contents with "The Pedespeed." On the first page there is an engraving representing the use of this novel means of locomotion. It consists of two wheels some fourteen or fifteen inches in diameter, which are secured to the feet by means of stirrups, and a piece of wood to fit the outer and upper conformation of the legs. Thos. L. Luder, Olney, Ill., is the designer. "Visit to a Steel Manufactory," "Co-operation among Inventors," "New Mechanical Movements," "Progress of American Inventions in Europe," and "Products of the Pine Forest," are especially interesting. Address, Munn & Co., 37 Park Row, N. Y. Price $3 per annum.

OLIVER OPTIC'S MAGAZINE.—The March monthly part received; replete with interesting and instructive reading. The full page illustrations are excellent. "HERO, the Bloodhound of Libby Prison," and "SPOT, the Andersonville Bloodhound," call to mind harrowing scenes of the late war, which we would fain blot from the memory. "The Hanging Gardens of Babylon," "Hints about Flowers," "The Ear of Dionysius," "Base-Ball Song," "Some things about March," "The Handwriting of Great Men." With March closes the capital story "Bear and Forbear," the last of the "Lake Shore Series," and with April begins "Field and Forest." Published by Lee & Shepard, 149 Washington street, Boston, at $2.50 per annum.

THE LADIES' FRIEND, April, 1870, displays the "Parisian Modes," or fashions for spring, giving a very full description of all those little articles of dress which are so interesting to the gentler sex. A cut showing a "full dress promenade toilet of a lady in Louis XVI

Reign," is well worth the price of this number. The extreme of fashions in our day have not reached so ridiculous a figure as is here shown. The frontispiece—"On Guard"—is a pleasing picture, as is also a scene in Cuba, showing a Cuban style of vehicle termed a curricle or volante. "Did he forget her," "The Cascannon's Aunt," "A School Girl's Story," and other fine stories, poems, &c. Terms: $2.50 a year in advance. Address, Deacon & Peterson, No. 319 Walnut Street, Philadelphia.

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Short Advertisements inserted in this column at 25 cents per line each insertion.

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“ Improved taper, ⅞ and 1 in., $5; 1⅛, $5.50; 1¼, $6.75; 1⅜, $9; 1½, $11.
“ Half pat., ⅞ and 1 inch, $5.00; 1⅛, $6.25; 1¼, $8; 1⅜, $11; 1½, $12.00.

Axles, Long half pat., ⅞ and 1 in., $6.50; 1⅛, $7.50; 1¼, $9.50; 1⅜, $12; 1½, $15.
“ Plain long taper, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10.25; 1½, $13.25.

Axles, Improved taper, long, ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $9; 1⅜, $11.00; 1½, $13.75.

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Lamps, per pair, fine, $15 to $30.

Leather, per ft., dash, No. 1, 13½c.; do., No. 2, 11½c; railing and collar, 24c. to 26c.; enameled top, No. 1, 25c.; do., No. 2, 22c.; enam. trimming, 23c.

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“ spoke ten. machine, each, sm., $15; large, $25.
“ bolt cutting machine, each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head, 33c.

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Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.
“ improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
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Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
“ Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
“ Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $2.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1 85; ⅞ $2.00; 1 inch, $2 15; 1⅛, $2.50; 1¼, 2.65.
“ close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
“ close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
“ ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
“ neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
“ Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.50; 5 bows, $9.50.

Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $13.50
“ Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
“ plated, short, $1.20; 1 long iron, $1.37.
“ japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 14c.; Bright, 15c.; 1¼ inch, 1c. per lb. more.
“ Rowland's bright cast steel, 1¼, 3 and 4 plates, not shorter than 33 inch, 22c.; 1½, 3, 4 and 5 plates, not shorter than 33 inch, 21c.; shorter than 33 inch, per lb. extra, 3c.
“ Bright oil-tempered, per lb., 1¼ inch, 18c.; 1½ inch, 17c.
“ Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top holders, Thomas patent, buggy, $5 each; extension, $7 each.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.25; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.25; No. 30, $1.45; No. 35, $1.60; No. 40, $1.80.
“ Shoe, H. B., per lb., No. 10, 60c. to 82c.; No. 3, $1.00 to $1.10; No. 12, $1.30.
“ dark blue, per lb., No. 10, 90c.; No. 3, $1.15; No. 12, $1.35.
“ machine, Marshall's, Shrewsbury, black, No. 432, $2.50; No. 532, $3; No. 632, $3.35; white and black same price.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.45; No. 30, $1.60; No. 35, $1.80; No. 40, $$2.10; white, 25c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜. $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.75; black, silver top, $2.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.75; buggy, $3.75; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
“ ash, red oak and common hickory, per sett, 1,
“ 1⅛ 1¼, $1.25; 1⅜ $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
“ sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2.25 per set.

Poles, hickory, per dozen, rough, $12; finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
“ sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
“ “ double “ $4.50 “

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $10.00; Noble & Hoar's English, $9.00; black enamel English for carriage tops, $8.50; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING. $6 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., $1.00; No. 1 Prussian, 60c.; No. 2 Prussian, 50c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 20c.

Greens—Pure chrome, L. M. & D. shades, per lb., 20c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 15c.

Reds—Best carmine, No. 40, per ounce, $1.50; fine crimson or claret lake, per lb., $3.00; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 40c. per lb. (*A very rich deep red for striping and fine carriage painting.*) Vermillions—English pale, $1.10; deep, $1.05; Ger. gotn. pale, $1.20; deep, $1.10; Chinese, $1.20; Trieste, $1.20; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 11½c.; Colorado lead, 11c.; Nevada, 10c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 12c.

Yellows—Pure chrome, L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.10; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c.; 00, 75c.; 000, 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

No. 30.

WM. BURWELL,

MANUFACTURER OF

CARRIAGE MOUNTINGS,

No. 236 ARCH ST., PHILA., PA.

No. 69

Coach Handles, various styles, Pole Crabs, with or without hook, Back Strap Buckles, Pole Strap Buckles, Mail and Open Bands, Top Props, Nuts and Rivets, Inside Handles, Octagon and Plain Club Handles.

Pole, Yoke, Shaft and Swingle Tree Tips (Plain and Octagon Patterns from new Designs.) Dash Rails, Handles, Joints, Axle and Joint Nuts, &c., &c., Plated to Order.

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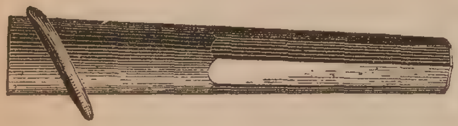
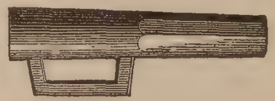
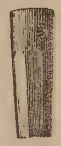

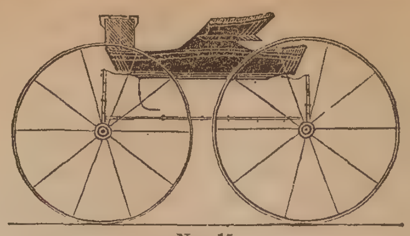
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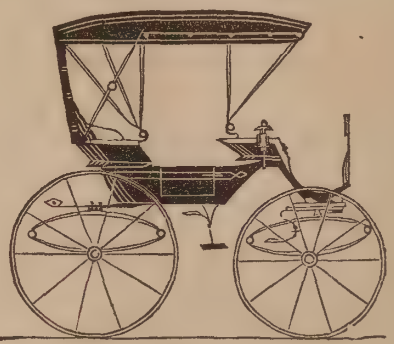
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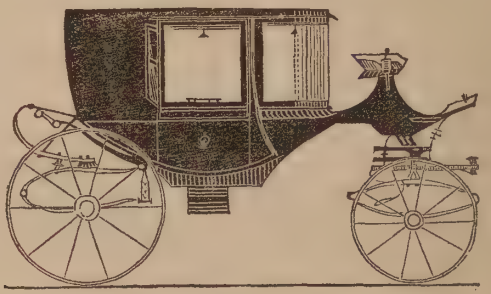
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And all the different varieties used by makers of fine carriages,

Twenty-fourth St., below Callowhill,
PHILADELPHIA, PENNA.

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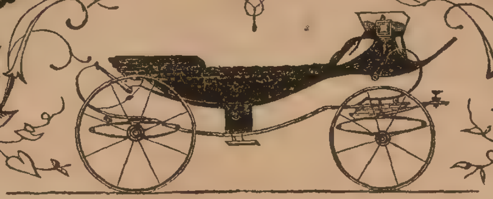


INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 8.

MAY, 1870.

$3.00 PER ANNUM
Always in Advance.

NATURAL GIFTS.

The Creator, in the distribution of gifts to his creatures possessing animal life, was pleased to select man as the only one whom he endowed with the powers of reflection and reason, and speech or language, on which the former mainly depend. The inferior animals have sufficient sagacity to supply their immediate wants, defend themselves from harm, and enjoy life according to their own instincts; but not having the power to reason or reflect, and the gift of speech, they are for ever debarred from advancing beyond a certain limit. They may improve by association among men, and be trained to perform truly wonderful feats, but, after all, they cannot overstep the bounds marked out for them.

Man being susceptible of improvement, and farther distinguished from the brute creation by the use of language, may advance from one degree to another in knowledge, until he searches out the hidden mysteries of almost everything connected with mind and matter. In possession of these superior gifts, he is enabled to advance step by step, taking a more exalted position from generation to generation.

But, in comparing men with men, we see at a glance that there is a wide difference in the bias of their minds, some inclining to one pursuit, and others to another; yet not all of those who possess similar natural tastes have equal powers of perception. The All-wise did not so decree it. He gave to the majority sufficient intelligence for all needful purposes, when rightly used, and to a few persons only superior mental power, constituting them geniuses. These favored ones strike out from beaten paths, and surprise the world with their inventions and discoveries. They do not always succeed in accumulating wealth, for they are apt to underrate the real worth of their inventions, and dispose of them at a price based on the small amount of time and labor expended, not taking into account their priceless value to the world.

Those who are gifted only in money getting too often reap the full benefits, while the inventor dies poor. This was true in the case of Mr. Seth Boyden, of whom it has been said: "Perhaps no man of his time has done more to promote the industrial arts in this country, who, though his inventions have been mines of gold to others, lived a poor man, and died at the age of eighty-two a poor man in all except the respect and honor which reward a good life." Probably he did not desire to amass a fortune, and, if so, more praise is due him for his liberality.

We might mention inventors now living who have compelled the people to pay roundly for the use of their improvements, which, we think, is not far from just and right during the continuance of their patent through a reasonable number of years.

In whatever calling men may be engaged, they will present varied talents in the pursuit. Among the large numbers of professional men, comparatively few are gifted by nature with a high order of talent. Artists, so called, are very numerous throughout the world, and yet there are but one or two in every generation who attain to any great degree of excellence. Among mechanics the same is true. But while the smaller number possess superior talents, the majority have sufficient powers of imitation to enable them, by continued application, to overcome their lack of natural gifts and ultimately attain considerable proficiency. As every individual strives to surround himself with whatever is desirable in life, and all are not equally gifted, or have not had the opportunities afforded them of acquiring that which would tend to elevate them, we find society divided into several classes. These classes, while they are in a great measure dependent on each other, do not work at all times harmoniously; hence, we find a good deal of see-sawing and pulling in opposite directions, which we suppose will never be entirely remedied.

There is ample room for improvement in the relations the different classes bear to each other, and a more liberal spirit is slowly yet steadily being manifested; but that time can never arrive when those who have been deprived of natural gifts, and favorable surroundings, will be able to fill the places of their more fortunate fellow beings.

IT IS ENCOURAGING.

In the outset of any new enterprise there will be drawbacks of various kinds; and in nothing, perhaps, is this more keenly felt than in the attempt to establish a circulation for a paper or periodical, sufficient to place it on a firm and profitable basis.

The number of those persons who will speak an encouraging word are very few, and should there be a rival publication, it may give you the cold shoulder, stare at you with eyes green with jealousy, or be so self-conceited and grasping as to wage an open war upon you. If you are numbered among the unfortunate ones who have their little all invested, and who do not consider it wise to make a great display on borrowed capital, your standing as to dollars and cents will operate to your disadvantage in many instances. A daily or weekly newspaper may be more easily established than a periodical devoted exclusively to a manufacturing interest, for they have an unlimited field to work in. The news of the day is eagerly sought after by all classes, and as the columns contain articles on a great variety of subjects, and wants, births, deaths and marriages, also advertisements of every description, the canvasser may go from door to door, and not be compelled to consume a great deal of time to no purpose.

If the paper be published in the interest of a political party, the subscription will be mainly confined to those who agree with the editor's particular views; but, in this case, a wide field is open, which includes men engaged in a variety of pursuits.

In our cities, the newspaper carrier, as he travels over his route, may be seen to shy a paper down into a basement for a barber, a step or two and he twists one on the door-knob of a bakery; now he slides one under the door of a dry goods merchant, and as he follows on, he serves the doctor, dentist, druggist, carpenter, coach-maker, shoemaker and others. It is quite different with a monthly like our own. Carriage-makers, and those who furnish the stock they require, are the only ones on whom we may call with the hope of obtaining subscribers. It will be seen, then, that we labor somewhat at a disadvantage, and are required to put forth great exertions in order to produce a work which will contain matter of vital importance to the trade; and we must also be under a heavy expense in canvassing the whole country to present the claims of the work. And then, again, not every carriage-maker will admit that there is any necessity for such a publication. "Carriages," they say, "are carriages, and nothing more, and it matters but little whether they be of late style or not, so they contain sufficient room for the accommodation of the occupants." Others may be prejudiced against everything of the kind, because they had "failed to derive any benefits from works they had formerly taken." So that if it is not one excuse it is another, and the publisher may often be seen to stroke his forehead, which is throbbing with anxiety, lest his scheme shall fail, and his labors go unrewarded; but if he holds on, watches every point more closely, profits by the criticisms which are always given free of charge, and each month keeps up a lively interest in the departments, in time the mountains of difficulty will vanish.

We have had some experience of the kind mentioned, but are now receiving encouragement from every quarter. It is encouraging, then, to find that the indifference on the part of many persons has given place to words of praise, that those who saw no necessity for them to subscribe, now write us that "we prize the Journal very highly, and cannot get along without it."

It is encouraging to hear from the lips of traveling agents, who go out from New York, Boston, Philadelphia, Chicago and other cities, to sell carriage goods, that they "see the Journal everywhere."

It is encouraging to receive so many letters from apprentices and journeymen, to be answered privately or through the Journal, as to certain points connected with their respective trades.

It is encouraging to know that our advertising columns have become so highly prized by those who wish to attract the attention of carriage-makers and secure their custom, and that the majority of those who use our columns state distinctly that they have seen the good effects in an increase of orders.

It is encouraging to know that orders press upon us for office and business charts, cards, bill and letter heads, envelopes, &c., when formerly there was but little done in this line, and that we have aided in supplying employers with good hands and workmen with situations.

We shall not relax our efforts to please, but rather endeavor to work more assiduously, and to this end we hope that skilled artisans, in different sections, will send us whatever they may have that is new. The Journal should not be the organ of any one section, and is not. It is published in Philadelphia, a city of which any country might be proud; but we do not care to inhale enough air to make ourselves the size of an ox over it, and see nothing good in anything from a distance.

GLEANINGS.

The Messrs. Collings, Carriage-Makers, in Arch street, above Sixth, Philadelphia, lately sustained damage to the amount of one or two thousand dollars through the malicious hacking and cutting to pieces of several carriages by a person or persons unknown. We visited their premises, and were permitted to ascend to the fourth story, where the dastardly act was perpetrated. Arriving at the store room, we walked up one aisle and down the other, and could follow the maniac, step by step, by the direction in which the cutting instrument entered the panels. Leather tops and linings were cut into strips, and lamps shivered to pieces. Not being aware of having so bitter an enemy as this one has proven himself to be, they are at a loss on whom to rest suspicion. * * The English Government proposes to hold Annual International Exhibitions, confined to a limited number of articles. The productions of all nations will be admitted, subject to the obtaining the certificate of competent judges that they are of sufficient excellence to be worthy of exhibition. There will be no prizes offered. * * There are 600 daily and 5,000 weekly papers in the United States. In 1810, 2,000 was considered a large circulation for a daily in New York or Philadelphia. The circulation of a single daily in New York is now greater than that of the entire press of our country sixty years ago. * * There are seventy-seven trains daily from New York to Newark, N. J., and eighty-four from Newark to New York. * * In Paterson, N. J., there are sixteen silk factories, in which 3,500 hands are employed, and 70,000 spindles run. * * The expiration of the earlier patents of Henry Bessemer, for the manufacture of steel, will not throw the "Bessemer process" open to the public. Mr. Kelly, an American inventor, also obtained a patent by priority of invention, which does not expire until June, 1871. Messrs. John A. Griswold & Co., Troy, N. Y., control the Kelly patent, and are trustees of the Bessemer patents in this country. * * Our new Office Chart, 24 by 30 inches, containing 28 plates of the latest standard styles, has been pronounced by competent judges the handsomest chart yet published. Price, $1, post-paid, and secured from damage by being sent on a roller. * * We have in press a small sample book of styles for the firm of Robinson & Bro., Wilmington, Del. The plates are drawn to the half-inch scale, each one being of the exact proportions of the work they build. The books are not for sale. We are prepared to fill orders of this character. * * Striping the sides of spokes is gradually going out of fashion. * * Fine imitation of cane work may be purchased, which can be cut to suit any panel, and made to adhere by the use of varnish. It is not a *transfer* article, but is like the real cane. * * Carmine continues to find favor for light work. * * Dealers in carriage materials did not have a lively trade during the month of April. * * It is affirmed that the sheets turned forth from the press yearly at the New York *Times* Building, and the one adjacent, would carpet the equator on land, and throw a floating bridge over the Atlantic and Pacific Seas. * * A square mile of buildings are erected every year in the City of Philadelphia. * * The New York conspiracy law, which related to strikes, was lately repealed. It passed both Houses, and was signed by Governor Hoffman. * * The colony of Victoria, Australia, according to the last census, shows that twenty-five per cent. of the population was engaged in mining, ten per cent. in agriculture, ten per cent. as artisans and mechanics, ten per cent. in trade, three per cent. as laborers, and ten per cent. was receiving instruction. The wages of skilled artisans vary from $2 to $2.50 per diem of eight hours. * * Bright yellow has been suggested as the best color for railway signals, experiments made proving that it is most easily distinguished. * * Seth Boyden, of New Jersey, was lately called from life's labors at the age of eighty-two years. He possessed rare inventive genius. "He invented a machine for splitting leather, and another for cutting brads, greatly reducing their cost. To him we are indebted for patent leather and malleable iron; also, for important improvements in locomotive engines, and many other mechanical processes. His funeral was largely attended by the manufacturers of Newark, N. J., who pronounced him the most useful citizen Newark had known." * * The crop of cotton at the South, in 1869, exceeded 3,000,000 bales, and sold for, on an average, nearly 20 cents a pound. * * Philadelphia contains more buildings than New York and Brooklyn combined. * * John Goller, of Los Angelos, Cal., has lately taken out a patent for an improvement on C springs. It is composed of wood and steel. * * The Bytricycle is the name of a French invention. It is a double omnibus, having six wheels, two large ones in the centre. It is a clumsy looking affair, but as it is constructed on the principle that to avoid danger by upsetting, the centre of gravity should fall within the base, passengers may rest easy when this vehicle is passing along a hill-side road. Buy the *Scientific American*, of April 9th, which contains an engraving and full description of this singular vehicle. * * Hill's Patent Locking Whip Socket is one of the latest novelties. * * Bessemer's Conservatory is built of iron, yet shows not one flange, tie or bolt of any description. The castings were executed by Messrs. Andrew Handyside, of Derby and London. * * We were recently favored by a visit from the youthful and enterprising editor of "*The Hub*," Mr. G. W. W. Houghton. Having previously made his acquaintance in Boston, we were pleased to meet him on his first visit to Philadelphia.

ADVERTISEMENTS.

M. Langhorne, Washington, D. C., whose advertisement appears in this issue, has lately secured a patent on what he terms a "Nut Lock." This improvement will doubtless be appreciated by the trade everywhere. In the absence of an illustration we cannot enter into details concerning it. We will give a more extended notice hereafter.

Chambers, Bro. & Co., 3001 Chestnut st., Philadelphia, Iron Founders and Machinists, having purchased "Johnson's Patent Bolt and Rivet Cutter," which was advertised in Vol. IV, are prepared to supply the trade with them. The illustration will furnish a correct idea of this device, which is claimed to be superior to all others for the purposes named. Parties who have tested them speak highly of them. All the bolts about a carriage can be trimmed in five minutes with this cutter. It can be applied in any position. See advertisement on margin of back cover.

Palmer's Iron Plane, E. G. Storke, Agent, Auburn, N. Y. This is an improvement over the wooden plane, in that it is more accurate and durable, and possesses peculiarities which render it superior in every respect to those made of wood, in the old stereotyped form. It is claimed for it that it is well adapted to all kinds of work. The jack-plane is at once a SMOOTH, a JACK and a FORE-PLANE, and for mitres is also a block-plane, and in an instant can be changed to either. Its accuracy and nice adjustments are fully shown when used on hard wood, which renders it of great value to the carriage wood-worker. See advertisement.

Topliff & Ely, Elyria, Ohio, of whom mention was made in the April number, in connection with their "Patent Steel Tubular Bow Sockets," having sent in an advertisement, with illustrations, a better idea may be formed of their improvement. New inventions are generally slow in finding favor; but with the "Bow Sockets," to see them is sufficient, and we doubt very much whether any other improvement, for many years, has been so quickly adopted by our best builders, East and West. The character of those who have already adopted the Sockets will be a sufficient guarantee to those who may not have been visited by the agent, or otherwise had an opportunity to see a set. Beer's Patent Seat Riser, which accompanies their advertisement, is designed for attaching seats to buggies and wagons, and is shown by the cut.

Chicago Varnish Company, 194 and 196 Pine street, manufacture Coach and other Varnishes, under the superintendence of Mr. R. Clough, who was 14 years with S. P. Smith, Newark, N. J. This company claims to furnish as good a stock as any put upon the market. Read their advertisement, and give their varnish a trial.

Newton H. Mack, Tunkhannock, Pa., whose advertisement has appeared from month to month in our "Wants" column, lately mailed us a circular, illustrative of his "Scientific Guide to Lettering and Shading." The principles laid down are correct, and will be of great assistance to those who have not had an opportunity of studying under a skillful sign writer. See his full address in Wants column.

NOTICE.

In the April number, we gave a Fashion Plate called the "Clarence Rockaway." In the explanation, we omitted to mention that there was a patent on the front.

We had made a note of it, but in hastily preparing the "copy" for the printer it was overlooked. A letter and circular from Mr. John C. Ham, of New York City, who is the patentee, called our attention to the omission.

Mr. Ham holds letters patent, No. 92,964, dated July 27, 1869. His claim, as set forth in the circular, is as follows: "What I claim as new is the top and front seat, extended in a line with each other in combination with the curved front, &c."

REDUCTION IN PRICES.

We have no doubt but what many of our readers examine the Price List each month, but lest some may not be in the habit of doing so regularly, we would direct their attention to it in this issue.

In the item of English varnish it will be noticed that our quotations for this month are: Harland & Sons', $9 per gallon; Noble & Hoare's, $7.50. Throughout the price list other articles are quoted at a reduced rate.

OUR NEW OFFICE CHART FOR 1870.

We state, without fear of contradiction, that this is the handsomest Office Chart yet published. It is the size of the former one, is printed on heavy lithograph paper, 24 by 30 inches, and contains 28 fashion plates of the latest standard styles. The oval centre is left blank for the insertion of the manufacturer's card. Surrounding the centre is a very elaborate design, forming a richly ornamented border. It is composed of scroll work, enlivened by fifteen human figures, who are represented offering the good things of the land.

The centre piece and border are in gold bronze. Duplicate orders have come in to an extent quite flattering. One party ordered ninety-two, while others have sent for from two up to two dozen. The builder cannot invest a small amount of money more profitably than by purchasing business and office charts, and distributing them judiciously.

Our Office Chart, nicely framed, will attract attention wherever placed, and be a standing advertisement at a trifling cost.

Price, single chart, $1. To insert the card in the same, $2 extra. Five charts, with card in centre, (in color,) sent, post-paid, $6. Six charts, post-paid, *blank centre*, $5.

Sent on a roller to prevent breaking. All orders promptly filled.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "French or Square Rule" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Vol IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted.

Fashion Plates Explained.

C SPRING FOUR-SEAT PHÆTON.

Plate No. 31.—This new design for a C spring phæton will commend itself to all who are lovers of the beautiful in a vehicle of this class. The beveled and rounded back quarter add greatly to the light and rakish appearance of the body, and being hung on C springs, an easy motion is secured. Taken as a whole, this carriage will, when completed, be found very saleable.

Dimensions.—Width of body to take 43-inch bow, with 2 inches turn-under, taken on the top line of back quarter to the bottom line of body. Front falling back ¾ of an inch from the coupe pillar, with concave sufficient to give the end bevel of seat, so as to bring the front bows on a line with those behind. Hubs: 6½ by 4¼. Front band: 3 inches; back band: 3⅝. Spokes: 1 1-16. Tire: 1 by 3-16, steel. Axles: 1⅛, steel. Springs: 1½, four plates. Wheels: 3 feet , inches and 4 feet 2 inches. Track: 5 feet.

Painting.—Body: panels and seats English purple lake. Carriage-part: English purple lake, lightened up with Munich lake, striped with black and gold.

Trimming.—Brown cloth.

Mounting: gold.

BERLIN LANDAULETTE, AMERICANIZED.

Plate No. 32.—Having heretofore published some beautiful designs of the Landau and Landaulette, with the cant and very full descriptions, we now add another Landaulette. Our readers will bear us out in the assertion that no other publication has given to the trade so much practical information in regard to these masterpieces in the art of coach building.

Dimensions.—Width of body: 52 inches over all, with 4½ inches turn-under. Boot: 30 inches. The deck panel of boot is swelled, which is formed in a press before it is put on. The front circular admits of being removed, when the back may be lowered, giving the appearance of a calash top. The crest panel, which is the upper narrow space of door, is portable, and is secured, when on, by plates and thumb screws on the inside. When the front and crest panel are removed, the top edge is neatly finished by a suitable piece of wood, which takes the same fixtures. Carriage-part: 8½ by 5⅛: Front band: 3⅞; back band: 4½. Spokes: 1⅜. Tire: 1¼ by ⅜, steel. Axles: 1 5-16, steel. Springs: 1¾, 5 plates. Wheels: 3 feet 8 inches and 4 feet. Track: 5 feet.

Painting.—Body: panel purple lake. Carriage-part: black, with ⅜ line of lake, edged pale orange. No striping on the sides of spokes.

Trimming.—Crimson satin.

Mounting: gold.

SHOO FLY SPORTING WAGON.

Plate No. 33.—This unique design for an open wagon possesses decided points of originality. The body has square corners. The sides paneled off, as shown by half diamond mouldings. The bowing line at top of bottom panel is now very fashionable.

Dimensions.—Half width of seat: 20 inches; this is taken on the top of seat frame, inside of front pillars. Three-quarter seat: 26 inches, with round corners. Slats made ¼ by ⅜, the outer surface worked in half diamond form. Hubs: 3¼ by 6 inches. Front band: 2¼; back band: 2⅝. Spokes: 13-16. Tire: ¾ by ⅛, steel. Axles: ¾, steel. Track: 4 feet 8 inches.

Painting.—Body: centre panel vestal green, the rest of body and seat-rail black. No striping on the body. Ornament: a green and gold Brazilian fly. Carriage-part: cuir color, striped black and gold. Front of spokes: vestal green.

Trimming.—Cuir-colored morocco, with black patent leather welt. Carpet: green, with crimson border.

Mounting: gold.

SEDALIA TOP BUGGY.

Plate No. 34.—The body of this job has square corners, with beveled panel below the belt; back and sides the same. The corners of the belt space are vertical, which adds much to the beauty of the body. Builders may rest assured that this will produce a handsome and saleable buggy.

Dimensions.—Width of seat to take 42-inch bows. Hubs: 6 by 3½. Front band: 2⅜; back band: 2⅞. Spokes: ⅞. Tire: ⅞ by 3-16, steel. Axles: ⅞, steel. Wheels: 4 feet and 4 feet 4 inches.

Painting.—Body: belt and seat skirt crimson lake, remainder black, no striping. Carriage-part: black, striped with lake and fine lines of white.

Trimming.—Brown cloth.

Mounting: gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents.*

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "Stray Steps," &c.

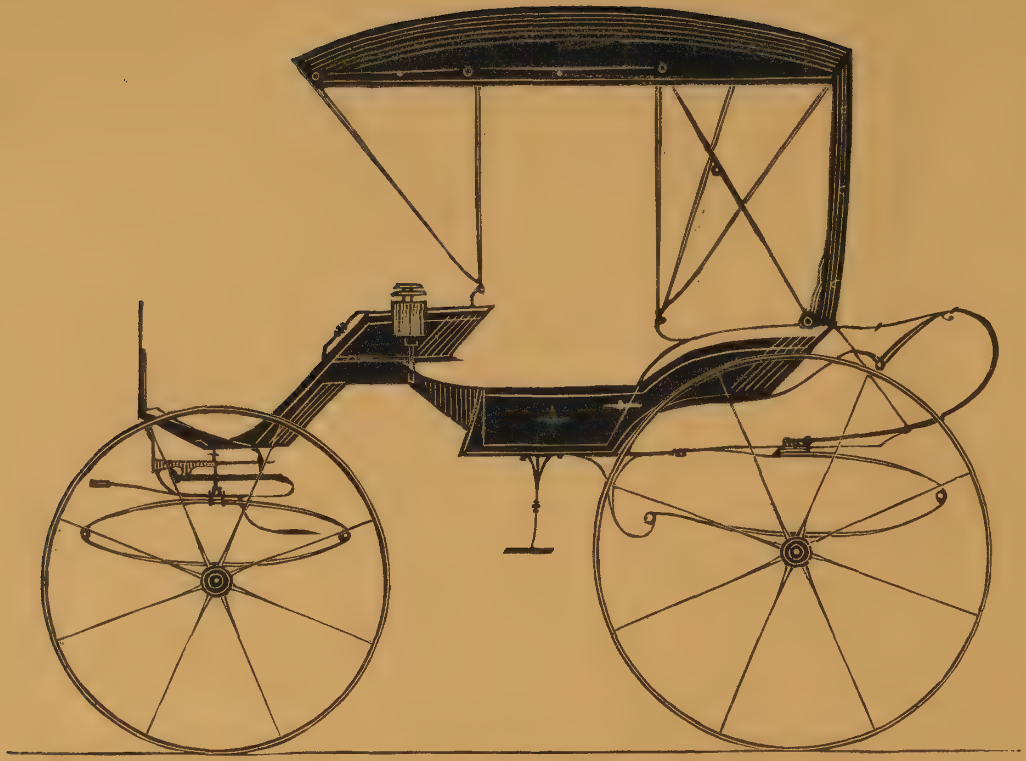
CHAPTER XI.

BIRD'S NEST SOUP, AND WHAT BEFELL OUR FRIEND CHARLIE WHILE ENGAGED IN NEST HUNTING.

"Charlie," said I, "did you ever hear of bird's nest soup?" "Oh, yes, of course I did; the Chinamen use it," answered Charlie. "Right you are, my hearty. How would you like a mess of it?" I asked. "Oh, well," said he, "I really don't know; but if we are a going to live among the Chinee fellows, why I guess we better get used to their ways; but I won't go the puppy-dog pot-pie. I'll try the soup, for they say its good, but nary cat or black and tan for my dinner." "Well," said I, "perhaps we could get some nests if we tried hard. They say there is a big cave away down 'long shore here somewhere, and if we can find it why we will introduce a feed of it for our mess. I don't know how to cook, but I suppose we can try." "Oh," said Charlie, "I've read how they boil 'em down, and drink it with chop-sticks; but I don't think I will ever learn to drink soup with chop-sticks." "Well, we will start in the morning early as we can. It's our liberty day, and we must try and fish a little. I believe there are some good fish inside the reefs where we will go."

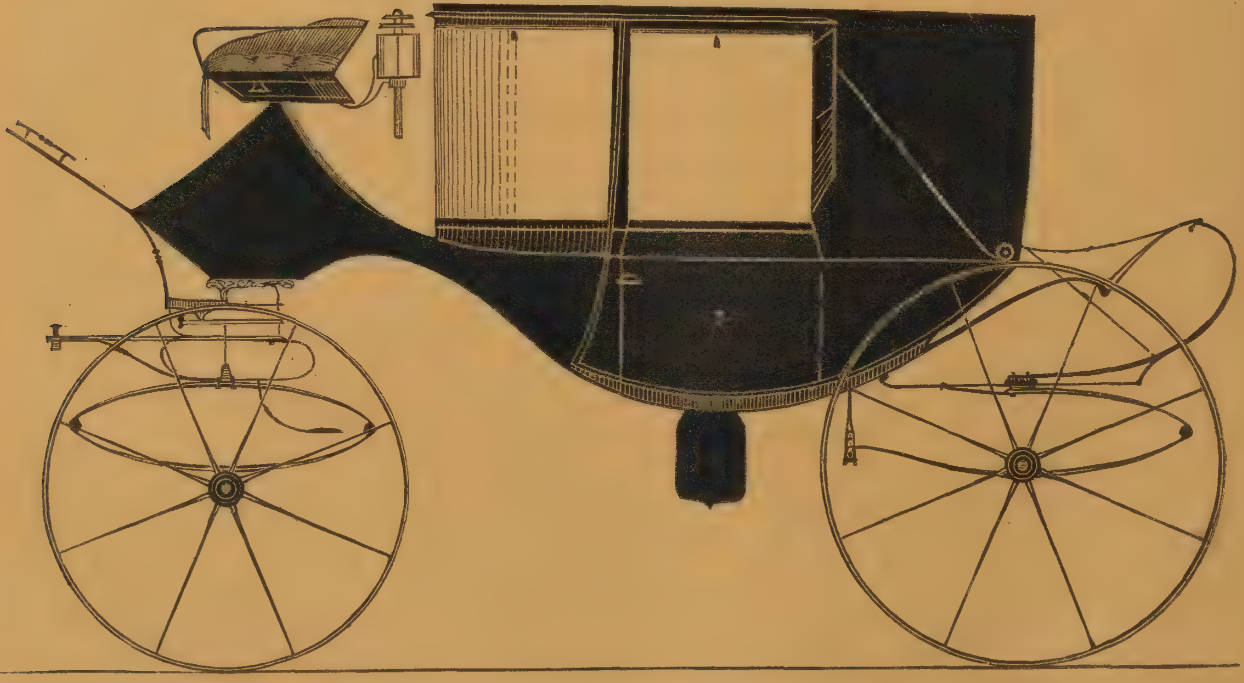
So off we started next day—there were five of us in the party—*a bird's nesting*, and we were supplied with a long stout rope, three bottles of good rum, and some provisions, our objective point being a long reef of rocks jutting far out into the sea, in which I had heard there was a large cave, this cave being the resort of numbers of sea birds for the purpose of breeding, and in our ignorance of the nature of the nests used by the Chinese for their soups, we thought any nests in this far East would be all O. K.; but we slipped up with a vengeance, and the single word "soup" to any of our mess for a year afterward would get the party who said it "a puck in the snoot;" in fact, I believe we had to "fight it out on that line" for the rest of the voyage.

An hour's walk brought us to the reef, and while some went to fishing, I among them, Charlie and another started into the cave to hunt for nests. The reef is about forty feet above high water, and the cave is a couple of hundred yards in depth. We got along finely at the fishing, and the nest men brought out a couple of armfuls of nests and eggs. The nests looked like anything but soup meat; they were dirty, filthy, rough bundles of hay, sea weeds and sticks. I was suspicious about their being of the right quality, but I was overruled, Charlie swearing he would have soup, right or not right, for he expected to settle down in China, and be hanged if he was not going to learn their ways, and so back he started for another load, but it was very near being the end of him and his soup. While he was in the cave a very sudden squall came up, driving the sea before it, and raising a fearful heavy swell, and I noticed that the mouth of the cave was to windward, and what alarmed me more was the fact that every wave which came rolling in filled up the mouth of it, making it utterly impossible for Charlie to get out. "My heavens, boys!" said I, "Charlie is lost; the cave is filling with water, and if the wind holds this way any longer we will have to leave here. Those heavy seas will soon wash over these rocks. My God! it will not do to leave Charlie in that horrible trap." "But what is to be done?" asked the now frightened men. "I see no way of saving him unless there is another outlet to the blamed place. Let us search and see if there is," and we scattered over the rocks. In a short time a hail was heard from one of the party, and we all ran to where he was. "Charlie is down here," said the man, "but he can't get up, he says the water is too deep to get out of the mouth of the cave, and that if he is down there many minutes longer he will drown, as the seas wash right in where he is standing." We looked down, and there the unfortunate fellow was standing on a ledge or shelf of rock, protected from the swell as it washed in, but the water, having no outlet



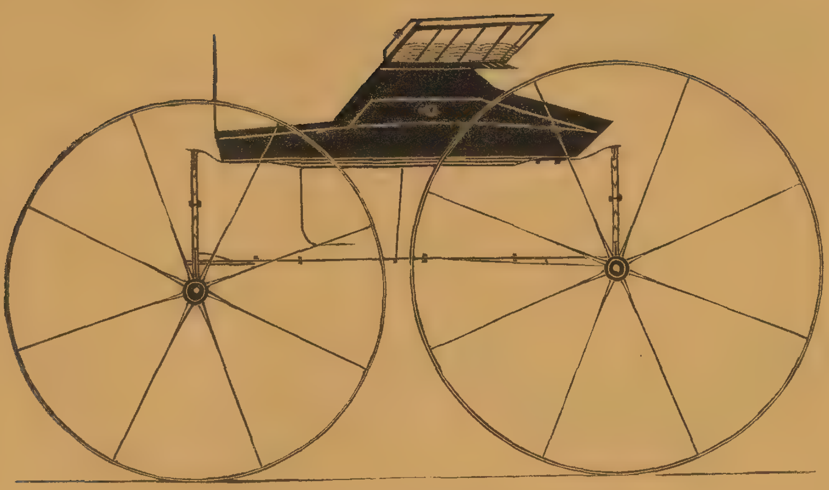
C SPRING FOUR-SEAT PHÆTON.

Plate No. 31.—Half-inch Scale.—Explanation on page 116.



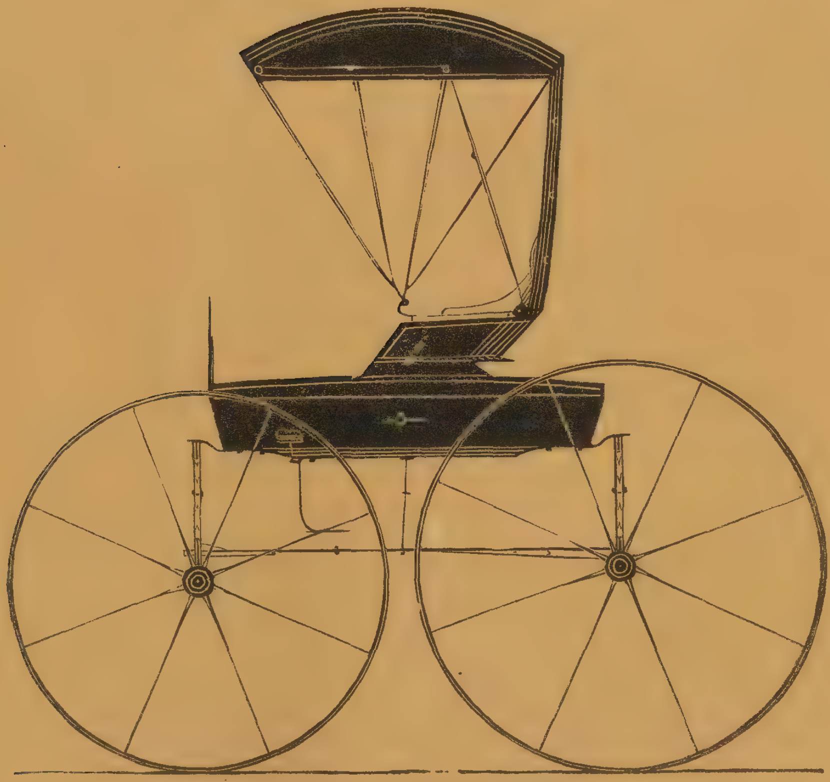
BERLIN LANDAULETTE, AMERICANIZED.

Plate No. 32.—Half-inch Scale.—Explanation on page 116.



SHOO FLY SPORTING WAGON.

Plate No. 33.—Half-inch Scale.—Explanation on page 116.



SEDALIA TOP BUGGY.

Plate No. 34.—Half-inch Scale.—Explanation on page 116.

except *upward* through the well-like hole in which Charlie stood, every sea sent a column of spray up to the top of the hole, which was at least forty feet from the bottom to the top, and as the seas got heavier the column of spray was proportionately larger and higher.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

DRYING LUMBER AND DRY HOUSES.

It is a branch of the business very important to carriage makers, especially where supplies of seasoned lumber are not adequate, that facilities for drying lumber be known. The old way of waiting for years for heavy stuff to dry, is hardly up with the times. The doubt, however, arises as to the best method of drying lumber without destroying its strength and elasticity. It would take a piece of hickory, 3½ by 4½, from three to four years to be so dry as not to shrink from a skein, and where short hounds and heavy tongues are used, the time would be greater than the majority of men would like to wait without the use of artificial heat, so applied as to drive the sap out, and prevent it from cracking. It may be said, in answer, that the stuff be gotten out, dressed and stacked, but still you have an endless trouble of waiting.

I have been reading your JOURNAL for some time, and have found valuable suggestions from practical writers. Will some of your numerous readers take the quill, and give us some suggestions upon drying lumber, dry houses, and their experience of artificial heat applied to the drying of lumber for carriage work? C.

PENCIL RULE & SQUARE

D. BOARD EDITOR

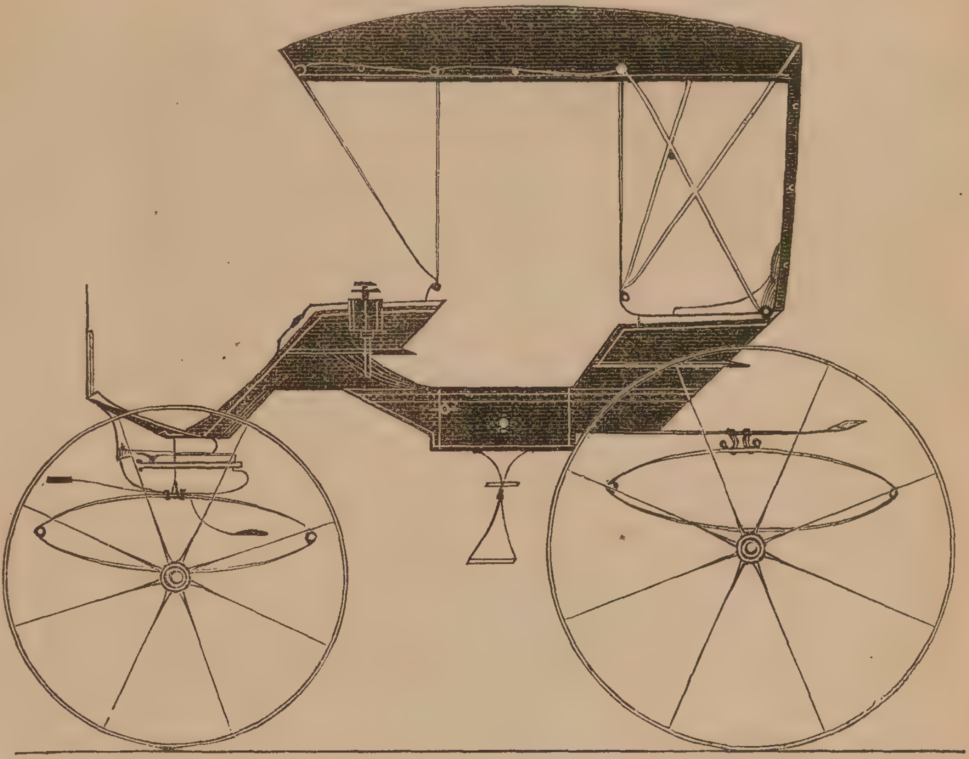
SCALE DRAFTING.

Continued from page 102.

In the former number we gave the laying out of this draft, and the inking in of all the lines. All the governing points were distinctly laid down, and cuts of the patterns used were shown in a manner at once plain, simple and easily understood by those who have followed our instructions step by step. As the laying out and inking in of the outlines is necessarily the first and most important part of any draft, the tinting of the panels and proper gradation of the lighting and shading is a part of the work more artistic than mechanical, and much will depend on the natural taste of the draftsman.

While the majority of persons may be deficient in natural taste at this stage of the drawing, a very commendable degree of excellence may be acquired by careful study and practice. It will be observed by our readers that we have given drafts in this department which were fully up to, if not in advance, of the prevailing styles, each one being drawn with the same care that is applied to our regular fashion plates, thus leading the student to reach out after novelty even in his study of scale drafting. This pattern will make a handsome phæton, and not having been previously published, is, we may say, an extra fashion plate.

In passing, we would say, that to become a skillful draftsman, one who can produce a draft which will bear to be constructed as shown, a practical knowledge of the construction of the body is absolutely necessary. An architect may produce a handsome drawing for a new edifice, and yet when the master mechanic shall attempt to carry out the ideas, and attempt to construct the building, may find that certain fixed laws in mechanics will not admit of the house being built according to the design shown on paper. This is equally true with the carriage architect; he may possess an artistic eye, and make pretty drafts to look at, but wholly impracticable when an attempt is made to construct the carriage. This body should take a 44-inch bow, and have 1½-inch turn-under. Back quarter paneled, front solid, with an ash pillar, let in on the inside, coming to the outer surface at the square corner. The rocker drops a trifle below the body, giving room to receive the rocker plate. The rounded panel under front seat is produced by glueing a piece of poplar, or white wood, on top of the rocker, according to the sweep shown in the draft. In this there is a rabbet to receive the panel; and, when paneled, the corner is rounded, producing a round corner and a straight panel across; also, a square corner in the outline, by the round falling back from the edge. The manner of inking or tinting the draft has been given in former numbers, and will not need to be repeated. See page 23, of this Vol.



SIDE ELEVATION AND CANT, OR WORKING DRAFT OF CIRCULAR HEARSE.

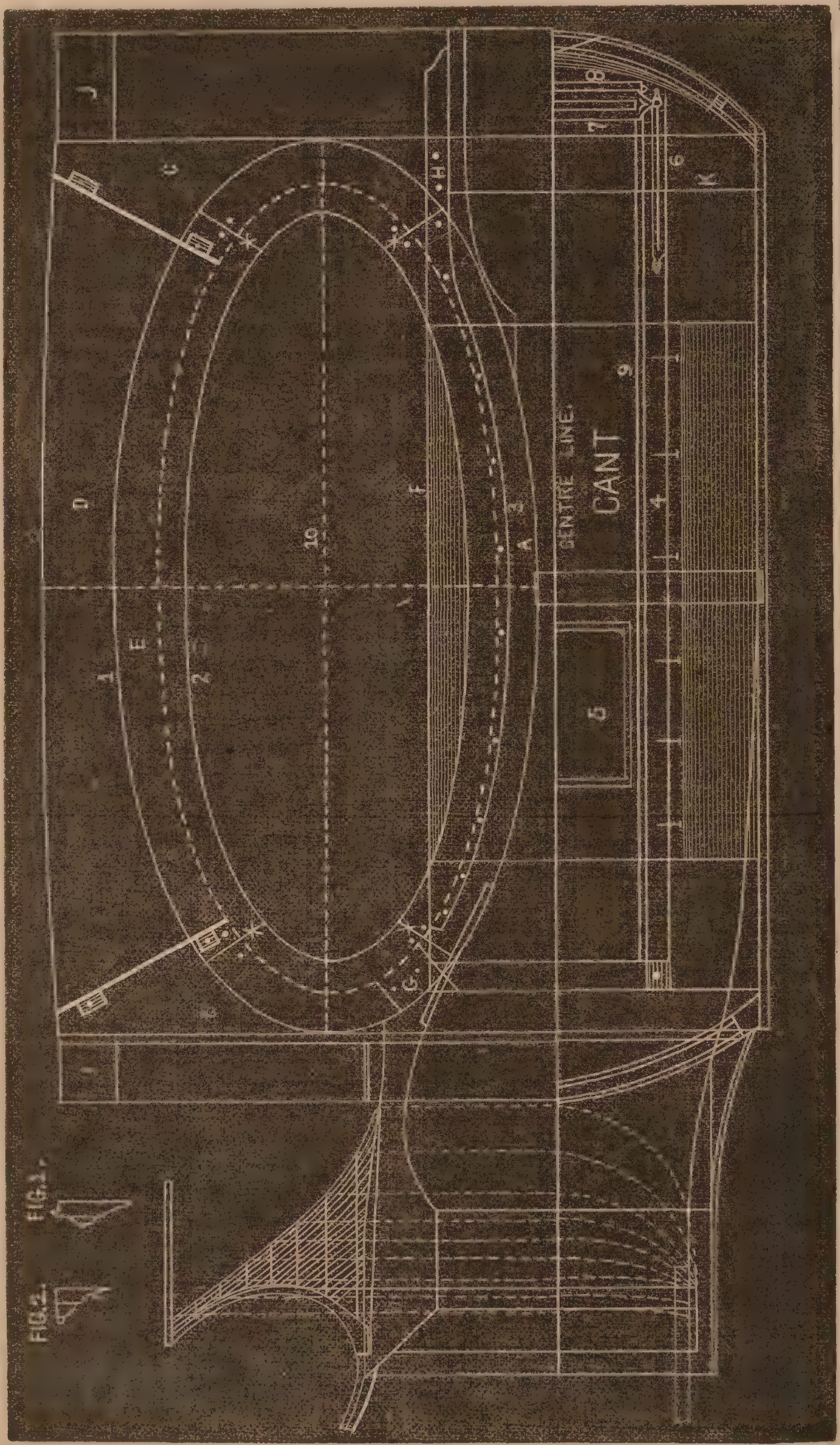
¾-inch Scale.—Plate No. 28.

PART FOURTEENTH.

BY A PRACTICAL CARRIAGE ARCHITECT.

By the request of several of our patrons, we herewith give a diagram and full explanations of the circular hearse. We do this cheerfully; in fact, it was our design to have presented it to our readers, for we were unable to find anything of the kind before published, and felt it due to those who may have occasion to build this class of work. Owing to the crowded state of our columns, we were unable to insert it in the last number. This drawing will convince every one that great skill is necessary in designing and constructing this beautiful hearse.

After drawing the side elevation, we will now proceed and dissect the different parts for framing, commencing with the bottom side, which is lettered *A*. This piece extends from the bottom line to the dotted line immediately above; follow the dotted line back to where the horizontal line *F* intersects it, and is lapped to the back pillar at *H*. Now, follow the dotted line to the front, where it forms a lap at point *G* with front pillar *B*. This is the bottom side, 4 inches wide by 1½ inches thick, which is taken from ash. Back pillar *C*, which follows the dotted line on inside, is 1 inch thick, ash, and is lapped at the bottom side at *H*. You will perceive that there will be a half inch projection on the inside; this will be made level by the shoulder coming on line *F*, which represents the top of the track. Our object is to use the stuff as thin as it will allow, so as to cut down any unnecessary weight. Front pillar *B*, extending into the dotted line, is 1½ inches thick, ash, and is lapped at *G*. The top rail *D*, extending into the dotted line, is 1 inch thick, taken from poplar, with a stub tenon and two long tenons at each end. This joint is covered by the torch, as shown in the fashion plate.



Piece *E*, extending from line 1 to line 2, is 6¾ inches wide by 1½ inches thick, poplar; the joints shown at points marked *X* are produced by slip tenons of ash. This piece receives the glass, and is shown by *Fig*. 1, with the rabbet taken out for the reception of the glass.

The next piece to be applied is 3 inches by ¾, poplar, the joints being at line 10; the finishing of the centre is by the use of a half-round moulding, ¾ by ½ inch. The concaves and rounds are all shown at *Fig*. 1. *Fig*. 2, the top mouldings. The first piece in this moulding is 5¼ by 1¾ inches; the second, 2⅛ by 1½ inches, finished with a half-round moulding, as shown.

I is the front circular piece, width 6 inches, and 3 inches thick, which allows the glass frames to pass each other. The bottom circle the same thickness, and 2¼ inches deep. *J*, the top back circle, is 6½ inches deep by 2 inches thick, poplar, lapped in the centre, as represented in cant. On the bottom back bar, the outer circle is the same as *J*, extending into line *K*, is 2 inches thick, of ash, and is screwed to under part of bottom side, and receives the circular doors, which are 1½ inches thick. Next we take up the concave piece, which extends from line *F* to line 3; it is 7 inches square, poplar. It is rabbetted into the bottom side, and screwed from the outside, as represented by the dots, the back part resting on the back bar, the lower edge being the continuation of line 3.

We will now turn your attention to the top view of the piece last mentioned, as shown on the cant. Piece 4 is 3½ by 2 inches thick, poplar; this is glued and screwed to the concave piece, as shown in the cant, leaving the track 9 inches from the centre line, 18 inches being the full width. The bottom boards ¾ thick, running crosswise, grooved together and screwed from bottom of piece 4. 5 shows the lid, which covers the opening left to draw off the water when cleansing the inside. 6 is a slotted plate, in which plate 7 slides, which is screwed to the top of the truck. 8 is the roller. 9 a half-round iron, which forms a track for the concave rollers of the truck to pass over.

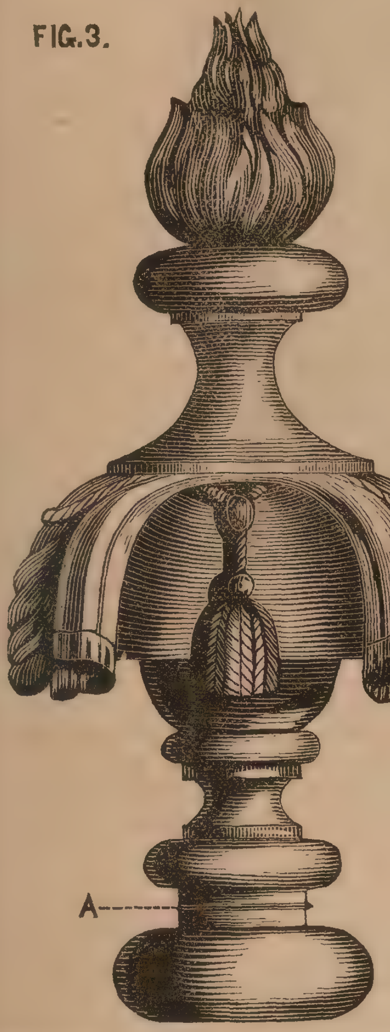
From centre line to outside of bottom side is 20½ inches, being half the width of body, the moulding of *Fiy.* 1 to be added. Half width of boot, 15 inches. The boot is shown free of hammer cloth, with the dickey seat frame attached. Manner of construction was explained on page 56, in the January number. The toe board brackets are not shown full length for want of space.

URN OF THE CIRCULAR HEARSE.

When the plate of circular hearse was given, it being drawn to the half-inch scale, it was impossible to give more than an approximate idea of the style of the urns, therefore we here give the accompanying cut, drawn one-third of the natural size, so as to present a better idea of these beautiful additions to the appearance of that hearse.

Full length of urn, from the base to bottom of torch: 12 inches; diameter over drapery: 6½ inches. Torch: 4 inches long; diameter 3 inches. The torch is inserted when the plume is removed. It (the torch) has a stationary dowel 3½ by ⅝ inches.

FIG. 3.



The base below the joint at *A* is secured to the body by wood screws. The upper is detachable by a brass screw, with a flange the size of the wood, which is secured to the upper part by wood screws; the lower part in the same manner, with sockets to receive the thread. These flanges are rounded to form a bead, which breaks the joint.

It is necessary to use brass for either the screw or the socket, to prevent rusting, should the urns remain for any length of time without being removed.

The design was furnished by Mr. Henry Firg, of Philadelphia, from whom we have other designs, such as carving for back bars, brakes or pump handles, body blocks, &c., drawings of which we will give in future.

To O. H. M., Des Moines, Iowa.—Fuller explanations will be given at some future time of the manner of making the front, frames, &c., of the round front Clarence coach; also, as to the splicing of the boot.

The book step can be purchased, we think, in New York or New Haven, but cannot now state of whom.

Palmyra, Wis., April 2d, 1870.

Mr. Editor—*Sir:*—If it would not be too much trouble, I should like to have you give cant or working draft of the "Oneida Rockaway," Plate No. 29, April number, Vol. 5, as it just takes the fancy of some persons here, and passes for a beauty of a picture. By the cut, I infer the back corner pillar is framed to the corner block where they meet at top of body, and we also wish to know if it is a moulding represented as running up the standing pillar, with the appearance of a door handle at the top arm rail.

If you don't think I am intruding too much, I would like to have you explain the proper construction of the Bradley body, in No. 5, Vol. 5, especially the back end panel, and the proper thickness of stuff to produce the right swell for the *deck and back end* panels. This is something new for these parts, and we would like to get it just right, as we depend on the Journal to lead us right, and consider the present volume an improvement on all its predecessors, and can but wish you great success in your good work. D. R.

Answer.—Being a plain rockaway, it will not require a cant. We think our explanations will be satisfactory.

The sides of body are taken out of two-inch poplar, the outside swept off, which gives a turn-under to the body, and the inside lightened out. The back corner pillar is lapped to the corner block, the joint coming below the top of side.

The white line on the middle pillar shows the division between the door and the stationary pillar. The cut shows a skeleton door, which admits of a portion of the curtain being opened when knobbed down, thus giving ingress without necessitating the unknobbing of the curtain.

The Bradley Buggy.—The bottom line, which extends to the white line above the concave, is taken from two-inch ash, and are beveled under from the outside, coming into a slight concave at the back part, lightened out on the inside to inch and a half; the upper side panel is put in a rabbet from the inside.

The end panel is taken from two and half inch poplar; give it all the swell this will allow. The top of the concave comes to a square corner at ends. The deck panel is swelled about two inches, the grain of the panel running in the direction of the white lines seen at the corner. This will require a wide panel. There is a sham pillar in front of body and seat, which is fitted and rabbetted over its edge, and moulded, as shown in the fashion plate. This pillar prevents the front edge of the panel from cracking.

London, Ont., April, 1870.

Mr. Editor:—We have had a little controversy in our wood shop as to the best method of splicing sills for a dog cart. One side contending that six screws are required at each lap, while the other side that four are sufficient. In the case of six screws being necessary, the lap is cut down lower, which brings two of the screws through cross-grained wood. Please inform us through the Journal which is the best.

Answer.—Four screws are all that are required in any ordinary lap. To let a lap run down, and then lighten out, leaving nothing but cross-grained wood through which to place screws, is very far from being the correct plan. As heretofore mentioned in this department, the grain of the panel should cross the shoulders of the lap.

WHEEL HORSE & MALLET

SPOKE SHAVE EDITOR

I agree with H. D. F. that "a great deal has been said in regard to the right and wrong way of making wheels," and I will add, that there yet remains a great deal to be said that is of vital importance as to the proper method of constructing the wheel.

The first question, as referred to by H. D. F., is that of preparing the wheel for the tire. A very important question it is, but I cannot discover where H. D. F. has given us what his experience is, *or his theory*, which long and advantageous service has dictated as the correct principle. I will grant that he has hastily traversed the entire operations connected with the construction of the wheel. I will also admit that he has hit or touched upon some very important points, for instance, the question, "the fitting the wheel for the tire." My inference from the question is, what is, or should be, the condition of the tread of the wheel to receive the tire? Now, if my inference be correct, I will endeavor to convey to the mind of the reader what I conceive to be the proper condition of the tread, (conceding that the dish of the wheel is dependent upon the tread, so far as the wheeler is concerned.) Before we proceed to consider what we conceive to be the correct principle governing the tread, we will introduce what we opine to be the best means to accomplish said end. First, we consider the necessity of using the tread plane, which I have never seen employed by any other wheeler than myself. It is an ordinary smoothing plane, with the face struck or worked out on a circumference of 4 feet 6 inches; the face plated with steel from end to end. With this plane it is impossible to have flat places on the tread, as would be the case with a straight-face plane.

It also prevents the liability of dressing the tread winding. The construction of this plane will not admit of its following the winding condition in which the wheeler finds the rims or felloes in the rough as they come to him in the bundle.

Having described the tread plane, we will endeavor to show the practicability of its use as applied to the dressing of the tread. In my judgment, many wheelers have fallen into a great error in dressing the tread square with the face of the wheel, which is the custom or principle controlling the great majority of the trade. This is, in my opinion, correct with a wheel that is driven straight on the front; or, in other words, set your set or guide pin in your set staff the same distance the hub is from the front end to the front mortise. But I do not think that it is a correct principle when we drive our spokes ⅛ of an inch back on front of the front mortise, for the reason that our wheel, when the rim is on, is not on a square facing; consequently, the draw of the tire is antagonistic to the bearing or strength of the spoke, forcing the spoke against its driven position, the effect of which is to throw the strain on the tenon, both in the hub and rim. My custom, or principle, in preparing the tread for the tire in all cases, is to square my tread from the face of the front spoke immediately on the hub. To accomplish this, I use a square, placing the blade on the tread, striking with the eye a straight line with the body of the square, the front spoke on the hub. My reason for this theory is this: I hold that the tire, on its draw, should tend to hold in check the possibility of the wheel departing from its original dish, as given to it from the draw of the tire, which should, in no case, be more than ¼ of an inch from its original position when it left the hands of the wheeler.

I cannot agree with H. D. F. in his theory as to the jointing of the wheel. I cannot, from my experience, as dictated by close observation, and twenty-three years' service exclusively to this branch of the trade, and there is no one point in the wheel that has claimed more of careful consideration than that of jointing the wheel, for the reason that all portions are more or less affected through the same not having been properly jointed. H. D. F. says that the joint should stand open on the tread, or back about the thickness of a saw-curf. He does not state the condition of the end coming together; or, in other words, he does not state how much higher the joint should stand than what it is at the spokes either side of joint. I do, as a general practice, raise my joint about ⅛ to 3-16 of an inch, and it is my desire that the joint should remain as near that amount as is possible upon the first hooping. In order to accomplish this, I cut my joint square through. If the joint should settle, the fact of its binding on the back, and not on the front, is a preventive of a continuation of the sinking in at the joint; the smith should also avoid pounding his tire between the joint spokes. He should hammer up his tire near them, and those next the same, as this has a tendency to prevent the tire from drawing steadily on the joint. Should the joint open on the inside, the plate will cover the same. The fact of the joint being open inside does not injure the wheel.

HAMMER, SLEDGE & ANVIL

V. ULCAN EDITOR

"MONITOR" DASHES.

Fig. 1 is intended for a round corner, and makes a very neat pattern; the rail, including handle, is swept with the corner; the collar and handle to be plated. It shows a straight dash, that is, there is no curve at top of dash.

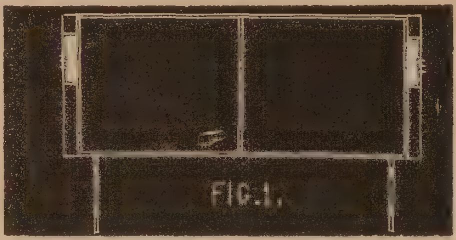


FIG. 1.

Fig. 2 is a plain square dash having no curve. We give this, inasmuch as it serves to show the slight variation between the other two, and, as customers differ widely in their estimates of what is about right, the plain dash will be found to suit a large number.

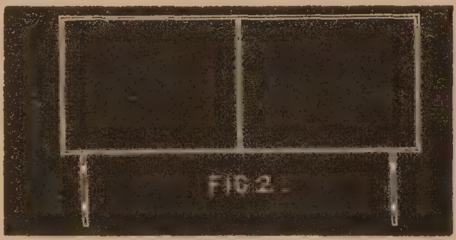


FIG. 2.

Fig. 3 shows a curved dash with side handles. This one and No. 2 are intended for square corners. No. 3 is at present the most fashionable, and we agree with those who pronounce it the prettiest pattern. The line to the left of the dish shows the curve of end view.

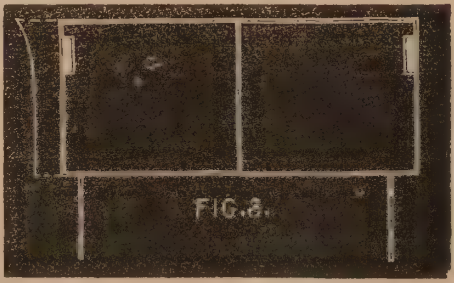


FIG. 3.

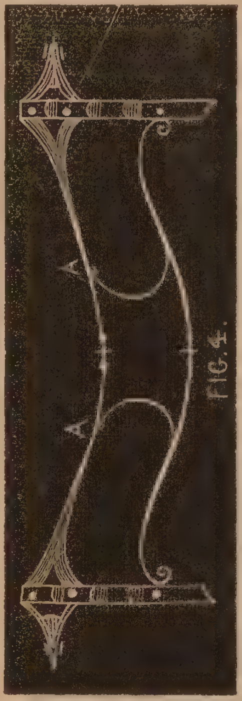


FIG. 4.

Fig. 4 represents the iron back bars for the "Berlin Landaulette, Americanized." For a carriage where lightness and a decidedly stylish effect is sought after, this method will be found far superior to those taken from wood.

The front or main bar is ⅝ thick at the bearing of C springs. The end carving of bar is of wood, the top part of iron bar being shouldered down a fourth of an inch from the outer edge of C spring, this allows it to cover the joint, and is tapered down to a running lap. When the wood is inserted it is screwed from underneath with wood screws, carved out and finished. When finished, the bar has the appearance of having been made throughout with iron. The nutting stays are welded to the back bar, and bolted through the main bar at points A A. The ends of back bar are finished with a scroll, the ends running under the C springs, and bolting through.

This style of back bars, when used in connection with the all iron carriage, of the "Killam Landaulette," (given on page 123, Vol. 4,) produces a style of finish not far from perfection.

NOTICE.

In the discussion of any subject appertaining to the several branches of the trade of coach-making, we have cordially invited correspondence, and to this end thrown open our columns to all, with the proviso that "the language used be respectful."

There has been already a good deal of sarcasm exhibited, and cant phrases used in derision, which could not result in any good. While we prefer that our departments shall be filled with articles from the pens of our practical mechanics, written in their own language, rather than from those who may display more learning but are mere theorists, we nevertheless desire that any point in debate shall be carried on between the contending parties each showing the other due courtesy.

We are led to these remarks by an article received treating on "Hooping Wheels." The correspondent is a ready writer, and would be a valuable assistant if he would pass by all personal reflections against his opponent, and belabor him *only* with good sound argument. We shall be pleased to hear from him at some future time, and would have expunged the objectionable portions of his manuscript, and published it, had the real name of the writer been given.

We are pleased to see the interest awakened on hooping wheels, &c., and trust that many others may send in their ideas. Carried on in a proper spirit, these differences of opinion will be productive of much good.

In sending matter for the printer, write on *one side* of the paper only.

HOOPING WHEELS.

(*Continued from page* 103.)

I will continue my remarks on hooping wheels, but not until I review the opposition I have met. I was not aware that I gave any explanation, but was plain enough, so any person, however inexperienced, might understand; but your correspondent, S. W. R., says he must differ with me, and no doubt he is honest in the matter of difference as he understands it. We are told, says he, to cut our tire off one inch longer than the wheels call for. I say so now. The wheel calls for the length of the rim, and all the tire takes up in bending, more or less. It will vary according to softness and hardness of the metal, and what we have to spare after bending, whether an inch or less.

Cut the tire off ⅛ of an inch shorter than the rim calls for after the tire is bent. This exact measurement we get with the traveler; first running the felloe, then the tire, not only to see if it is right, but to find where to cut it, to make it right, which, with care, will never fail. The common steel tire, 1⅜ by ⅜, will take up in bending 1⅛ of an inch, no matter whether forward or back wheel.

My friend S. W. R. understands this, and I will not multiply words; still he goes on to say, in substance, that his experience has taught him this lesson; and he thinks nearly all of the smiths will agree with him, that it is very necessary to upset and scaff the tire, for oftimes they fail to weld it solid the first heat, and have to try again, and the tire becomes thin.

In consequence, I would recommend all smiths who are troubled in that way to upset and scaff before welding by all means. It might be well in such case to cut the tire off two inches longer than the wheel calls for, so they could upset their tire to their heart's content, then they might possibly have stock enough to keep welding till they get it perfectly sound; but suppose they should happen to weld it solid at the first heat, they would be likely to have to use the hot file freely, if they wished to make a good job of it. Again he says, in regard to the dish, "friend H. D. F. said: a straight wheel is one which when you lay your straight edge on the face of the wheel it will touch the face of the spokes."

This I deny. I said what *we* term a straight wheel was thus and so; not that it was a straight wheel, but was the straight one which I gave in my lesson, and is the kind of straight wheels which we use in our shop, although we now seldom use them. Again he says, "there is hardly a practical smith to be found who is a good judge of timber, especially when there is a coat of paint or oil on it."

I believe the tread of the wheel is never painted. I hold that a smith who cannot determine in regard to the timber, cannot be a practical smith, because his attention is necessarily drawn to the wood in boring the felloes for the reception of the bolts, &c. He says, "take a set of wheels all of one class of material and all constructed alike, and give the tire the same draft, and nine times out of ten they will not all dish alike." Well, that is possible; it depends somewhat as to the manner in which they are cooled off.

Cooling off the first tire in cold water will cause it sometimes to shrink below its original size, and by the time the last tire is cooled off the water will become so warm that the tire will only shrink to its original size. This, then, is another point where the smith may have a chance to exercise some little judgment, and better the condition of his work. He now wishes to know "whether it is the timber, the make of wheels or tire, that they do not dish alike." To this I answer, it may be in them all; but a good practical smith can, by careful examination, judge by the timber, and whether all of the joints are tight or how much open, and can closely determine how much draft to give the tire or wheel. For instance, if, by examination, you find one wheel with the joints tight, both in the rim and on the shoulder of spokes, and another wheel ⅛ open in the felloe, and the rim snug on the shoulder of the spokes, both wheels having ⅜ dish, the rim being 1¼ inch also, the spokes at the shoulder 1¼ inch, then give the tire for the open felloe no draft, only what heat there is in the tire after welding. Supposing it to be a red heat, and for the tight wheel or felloe, give 3-16 of an inch draft when red as before, and your wheels will be dished alike, if the material is of the same quality; but this must be exact work, no guess work. The smith saying that he has given such and such drafts, does not make it so. It must be a fact, a reality.

If my friend S. W. R. should see fit to try the experiment, he must be careful and weld at the first heat; for if he fails in one and don't in the other, the one on which he takes two heats will become hotter all the way around than the other, and thus he may be deceived in the draft he intends to give, while at the same time he may be honest in stating, "he gave them all the same draft." In this case it will make just the same difference in welding up the tire as in the case of one felloe being ⅛ of an inch open more than the other. For instance, on a ⅜ tire, if successful in welding at the first heat, and you wish to give ⅛ draft after welding, it will be all right; but in the second tire if you are subjected to two or three heats before you obtain a good weld, then it will be similar to the open felloe. Run the "traveler" to the mark, and you will have the same draft. This requires practice, judgment and skill.

I can take ten sets of first-class wheels, made of the best material, such as we use, and prepared to my notion, and I will guarantee that every wheel shall dish alike within 3-16 of an inch, and may not exceed an ⅛, which will be what my friend terms a uniform dish. These wheels must be all of the same dimensions. I do not say this boastingly, stating only what I know to be true. I don't know what kind of wheels my friend is in the habit of using in that part of the country, with sometimes "one edge of the felloe, and then the other edge the highest, and again both alike."

The wheels that we use are all floored, and by laying the straight edge across the face of the wheel, the try-square will agree perfectly with the tread of the felloe. If the front edge of the felloe should be the highest, especially on a light and rather straight wheel, although the draft in the tire may be just right for a floored felloe, it would tend to throw the spokes back, and make them look as though they had been drawn over by an extravagant draft. In regard to axles I agree with my friend in the main, and at some future day will give my ideas.

H. D. F.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 105.)

THE MANNER OF APPLYING VARNISH TO A BODY.

We will repeat the concluding part of our article, which stated certain governing points, namely:

1st. The varnish should not be patched on.

2d. On all large connecting surfaces, more varnish should be applied than it is intended to leave on.

3d. When a narrow space connects with a large panel, the whole must be completed together.

4th. The varnish should be brushed "up and down."

5th. In rubbing or leveling, all brush marks and faults must be corrected.

Having previously stated that the beauty of the finishing coat depends almost entirely on the perfection to which the rubbing or leveling coats are brought up, we will now endeavor to explain the points assumed, first directing our remarks to the use of rubbing varnish.

1*st. The varnish should not be patched on.*

By this we mean, that the varnish, when applied to any part of the surface of a body, should be brushed over a certain part, previously decided on, which will, when completed, form a connecting whole, without laps, and not, as is the practice with painters, lay on the varnish only the width of the brush at a time, and that so lightly that when a fault appears the varnish is found to be set too much to be worked and blended together. The attempt to rebrush the defective part, be it a run or heavy lap, will be found of no avail. The unsightly joint, if such it may be called, will not unite with the rest of the varnish, and nothing but the strong arm and skill of the rubber will remove it. Just here we would say, that *a first-class varnish rubber is one of the most important hands in a body room.* Finishers fully understand their value, but do not, we think, as a general statement, give them, *openly*, their just dues.

2*d. On all large connecting surfaces, more varnish should be applied than it is intended to leave on.*

We will take, for example, the upper back panels of a coach. The back light, or window, and the drip moulding over it, divide the surface into what we might term four spaces; two vertical portions, and two which are horizontal. To lay on a level coat over this portion of a body, the varnish should be put on quite heavy. No attempt should be made to level the varnish until a sufficient quantity has been put on over the whole surface to insure against its setting.

Having applied it as stated, run through it quickly with the large brush, and with a smaller one carry a portion of the varnish on to and underneath the drip moulding.

This first laying off of the varnish is designed to connect it over the whole surface; and while the skillful varnisher will spread it with a view to having about an equal quantity over every part, he will not care so much for that as to be certain that he has a sufficient quantity applied to insure it against setting before he has properly manipulated it.

His next care will be to remove a portion of the varnish above and beneath the drip moulding, and around the back light, to prevent it from sagging, after which he again addresses himself to the panels, this time with a view to the proper leveling of the whole. His quick eye detects those portions where the varnish is heaviest, and by up and down or by cross brushing, as it may require, the varnish is leveled off. Again the tool (small varnish brush) is passed around, or under the mouldings, and then the panels are brushed horizontally over every part, and finished by vertical strokes.

During this whole operation, the painter must work quickly, and aim to finish the portion in hand before the varnish sets, so as to allow it to "flow out." In the process of leveling off, the brush should be occasionally cleaned out, by wiping it on the wiping cup; for, as we stated before, more varnish has been applied than it is designed to leave on.

Varnish laid on in this manner will show no laps; for having been finished together over the panel, it will flow out together, and appear as one undivided whole.

3*d. When a narrow space connects with a large panel, the whole should be completed together.*

We mention this separately from the second proposition, because it is the practice with some varnishers to finish each part separately, thus giving a broken connection, as where the head-rail space joins the back quarter. As the remedy has been laid down in the plan of varnishing the upper back panels, it will need no further explanation here.

4*th. The varnish should be brushed "up and down."*

That is, it is to be brushed vertically. "Up and down" is the language of the shop, and, of course, it comes natural to use it. Now, a panel an inch or two wide, a narrow belt, or space, cannot be so brushed; but experience has proven that larger panels require to be laid off in this manner.

The advantages are, that a greater quantity of varnish can be laid on with less liability to run or sag; the varnish flows better, and the result is, better work is produced.

5*th. In rubbing, or leveling, all brush marks and faults must be corrected.*

When the first coat of varnish is being rubbed, it is necessary to merely remove the gloss, as in the attempt to remove grit, &c., the color might be disturbed. The second and third coats will bear to be well rubbed. The second coat will hide the defects of the first coat, and the third improve on the second, thus preparing the surface for that season of anxiety—the preparation for, and the applying successfully of the finishing coat.

Before this interesting period in the history of every carriage has been reached, much hard labor of body and mind must be endured. Runs, bruises and burns may have to be corrected. Runs on the second coat are more easily corrected than when they appear on the third, as they get two coats, which is also true in regard to other defects. If, after a job is varnished, a run is discovered which cannot be corrected with the brush, it (the run) should be rubbed over as soon as the varnish is hard enough to bear it, allowing it to dry until the body is rubbed for the next coat. By this means half the run is destroyed, and the next rubbing will remove it entirely. If this course is not pursued, the run will be softer than the level portions of the surface, and will not come down under the leveling block.

In leveling the coats of varnish, use pieces of cork, wood or lump pumice stone, cut to suit the various spaces, and covered with two thicknesses of cloth. Block down both small and large spaces, using a somewhat coarse, though even grade of ground pumice, rubbing across the brush marks. Pumice stone should be used freely, and the strength of the arms and shoulders laid out on the work. Brush marks, and other defects, *must* be rubbed out. To do this, it is not necessary to draw the finger over the panel every moment to look at something you know not what. The wet panel will show the ridges far better than the part dried off by the finger. By drawing the rubbing block across the ridges, they will show whether they are rubbed enough or not. If you have laid on a proper second coat, you need not be afraid to lay out your strength on it. Cut it down well, slighting no part. To rub close up to the mouldings, and in sharp corners, have a stick of hard wood cut at one end in the form of a knife blade, and place the cloth over it, (one thickness,) placing the sharp edge up to the moulding, which will, by a few strokes, remove the grit that may be there. The coarse pumice will grow finer in the process of rubbing, which will answer to finish with. Or a fine grade may be used, kept for the purpose. No pumice should be allowed to dry anywhere in the corners.

Rub next to the mouldings *last*, for there is more danger of rubbing through, as there is less varnish here than out on the panel. Having slighted no part, wash off clean, touch up where any sharp edges have been cut through, and apply the third coat, which should be as carefully handled as the finishing one. When this has stood a few days, give it a light rubbing, and let it stand until ready for the finish. It will then be well dried and cut down nicely; the grit, if any, will not tear out. If the third coat has been laid on properly, it will not require so much rubbing as the second. The pumice should be fine and even, so as to avoid scratching. The sharp edges should not be rubbed off bare, for it is preferable to slight them in the rubbing rather than to be compelled to touch them up. The practice of having to touch up the edges all over a body, previous to laying on a coat of varnish, is a very foolish one, and may be avoided in a great measure by rounding them slightly when the body first comes from the woodshop.

The after coatings will sharpen them sufficiently not to be detected; but where this precaution has not been taken, slight them in rubbing, as the third coat should be well nigh as perfect as the last or finishing. The experienced rubber will look carefully over each panel before putting on any pumice; and where there may be grit, or any slight defect, he will give these his especial attention.

Having leveled the surface, less pumice should be used, and finally scarcely any. The panels should be finished off by passing the rub cloth throughout their length, bringing them to a polish. A body that has passed through the hands of a first-class rubber will, when washed clean and dried off, present a beautiful appearance. The finisher, as he surveys it, will feel a sense of pleasure, and at once decide to spare no pains in the effort to complete the job. In our largest and best regulated shops, the finisher is not a man of all work—one day with a pot of lead in his hand, the next coloring; now in the body room, and then in the gearing room. Oh, no, nothing of the kind. He is a finisher in the truest sense, and is not even required to rub varnish. Still farther, he does not varnish the roof, arch and inside edges of the body. He has *help* in the finishing room, who varnish all except the panels. These he attends to, and through his skill, attained by daily practice, the finishing coat is put on so nearly perfect, that to painters who have never had like advantages, surprise and mortification will be mingled as they gaze at the beautiful work, and remember their own wavy and dirty jobs.

The method adopted in laying the finishing coat is similar to that in the use of rubbing varnish. The varnish is applied heavily, leveled by repeated brushings, and carefully examined during the operation to detect any foreign particles that may appear.

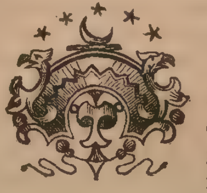
A picker is used, made of whalebone, sharpened to a point, or any other device that will remove the particles of dirt or gum. Having brushed the varnish throughout a given surface, let it stand a few moments, when the bubbles will evaporate, thus leaving the hard particles remaining, which must be removed. The finishing strokes are given lightly.

As it is beyond the power of words to give a perfect description of the manner of laying off this last coat, we will have to leave the inexperienced to gather whatever may be of value from the foregoing, and by care, good taste, and an unbending purpose, supplement our hints by *practice*.

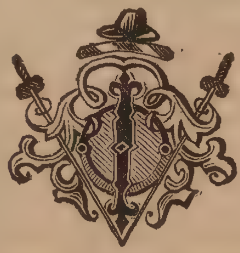
In conclusion, we would remark, that to secure a perfectly clean piece of work, the *room, body, cups and brushes, and the clothing of the varnisher himself, must be scrupulously clean;* for, without these precautions, it will be madness to make the attempt.

Ornaments.—We give herewith three original designs which will require very delicate penciling. The outlines must be distinctly defined, and every touch of the pencil, in finishing them, be applied with confidence.

No. 1 is suitable for a very narrow space. It is ⅞ of an inch square, is of a circular form, and animated by finishing the upper part of scrolls with the Wyvern's head.

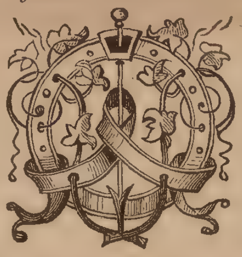


The middle portion of the semi-circular band is varied by "dancette," or zig-zag work. Lay in all gold; shade with asphaltum, enriched with a small portion of carmine; high light with white. The semi-circular space to be glazed with purple, (carmine and ultramarine blue;) dancette work, canary color (chrome yellow No. 2 and white) in the centre, and graduated toward either corner with a darker tint of yellow wreath, which supports the crescent, blue and white.



No. 2.—Ornamented Monogram O, V, I.—The cavalry hat, blue black, lighted with dark lead color.

Wreath, red and white; O, V, I, gold; scrolls, a dark, rich brown, lighted with orange or a light-brown tint.



No. 3.—Rustic initial letter U, combined with a garter.—Size in the entire pattern, and after the gold has been laid, glaze over the inner part of the garter with a light blue; the inner and outer edges to remain gold. The flying ribbon, pink, (carmine and white;) the shading, clear carmine, and carmine saddened with black. Stems of the letter U, reddish brown and pale green; leafing in similar colors.

Something new.—Having recently called on a firm which deals largely in artists' materials, we were shown some very neat designs of initial letters in color. They are in decalcomania. Each letter of the alphabet is doubled, and sufficiently ornamental to produce a good effect when transferred to a panel. For instance, A A, B B, C C, &c. We mention this new idea that our readers may be apprised of it. Should the carriage painters decide favorably, the firm will prepare a variety of styles.

Hanover, Pa., April, 1870.

Mr. Editor:—I would like to ask what is the best method of painting a carriage in say about three weeks, so that it will have the appearance of first-class work. B. T. P.

Answer.—We do not know what you term "a carriage," whether you refer to a buggy, Jenny Lind, or a small or large rockaway. A buggy, or any small sized vehicle, the body of which would not require much time in filling in, and rubbing out, might be finished so as to present a passable appearance; but for a heavier class of work, three weeks would not be sufficient time in which to give "the appearance of first-class work," according to *our* estimate of what is first-class.

To finish a light carriage in three weeks, the body should be ready to rub on the eighth day after the priming is put on. First day, priming; third day, second coat of lead; fourth, puttying up; fifth and sixth, three coats of crystal enamel; rub out on the ninth. Use quick colors, putting on the first coat of varnish on the tenth. Use clear varnish, laying it on heavy. The second coat on the thirteenth, and the finishing coat on the seventeenth.

The carriage-part will, of course, be completed during the painting of the body, and therefore has not been mentioned.

We have allowed for but two coats of lead, and three coats of varnish, which will insure a passable job in the hands of a first-class painter.

If you use the "Permanent Wood Filling," and no lead at all, the distribution of the time should be about as given above.

SHEARS, NEEDLE & TACK HAMMER

T. ACKS EDITOR

No. 2.

METHOD IN THE TRIMMING SHOP.

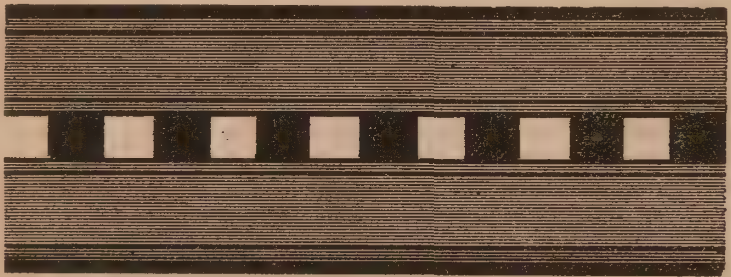
APPLIED TO A NO-TOP ROAD WAGON.

Begin by fitting your enameled cloth for the foundation of the fall; then fit the cushion, bottom to the seat, and get the correct flare of the seat with your cushion facing patterns; now cut and fit the facings, and paste them out; advance them as far as you can, because you will need to use them before anything else; next paste out the fall, and if it is to be sewed into the cushion front, advance it as far as you can; now cut and fit your carpets ready for binding, also the pocket to go under the seat, and now, while your pasted-out-stuff is drying, you can be working to advantage in covering the dash, and when it is done, if the pasted stuff is not yet dry, you can work along at binding the carpets; then get the tips put on to the shafts, and trim *them*, so that the painters will not be delayed by waiting your convenience to do them; now stitch the cushion front and the fall, and make up cushion complete, and to prevent the possibility of mistaking one cushion for another, or putting a wrong cushion in a job, mark the number of the job on a piece of paper, and paste it the bottom of cushion; now make up your shaft and body (check) straps; put them on and put in your carpet, whip socket, seat pocket, and finish up, if possible, so as to get that job entirely off of your mind, and thus leave you mentally free to commence another job without being compelled to carry a part of the last one on your mind; by doing this way you will have more time, and be in better condition to think of improvements in the piece of work you are about to commence.

And here I must call attention to the habit some trimmers have of stuffing a cushion as hard as they possibly can. I have seen men cramming (not stuffing) the moss and hair into an unfortunate cushion until the corners were bursting out, and still they crammed away for "dear life," like they could never get enough into it, or ever get it to shape until it was as hard as a brick, *or a New York Bowery Boy,* and when they went to tufting it, the amount of hard pulling on the button strings, and harder swearing at the strings when they broke, or at the buttons when they pulled through the bottom or top, was a caution to sinners. Now there is no need of all this hard stuffing; if a cushion is properly made and stuffed fairly it will keep its shape; a stuffing stick is hardly to be tolerated when stuffing a cushion, unless to lift the hair into the corners between the false top and top proper—use your hands, and you will judge better where the stuffing is needed.

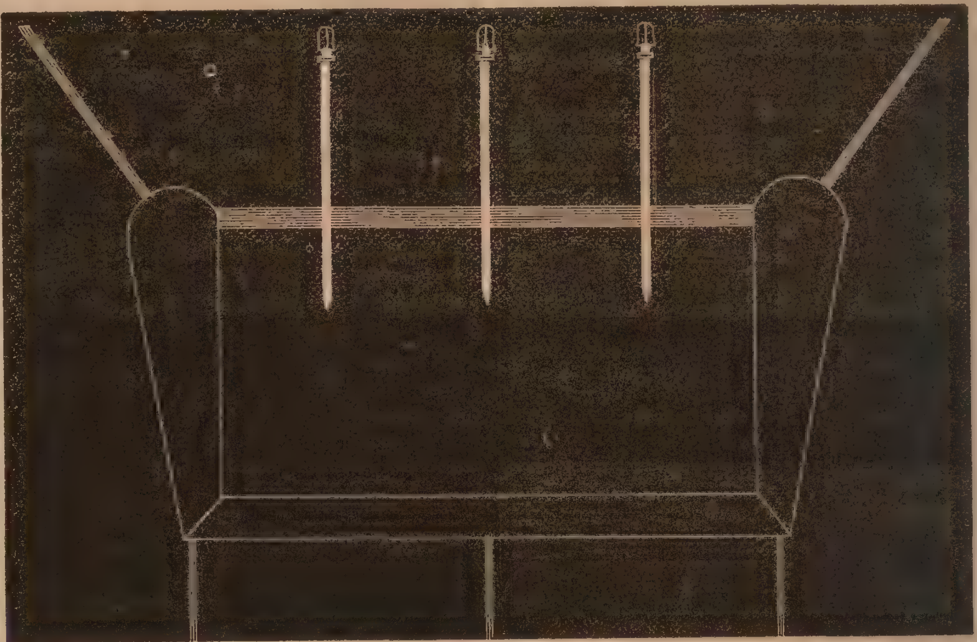
Brett, trimmed with Brown Cloth and Cloth Broad Lace, with Patent Leather Welts and Patent Leather Checkers on Broad Lace.

This job was built to order, and the style of trimming was dictated to the trimmer by the party who ordered the carriage, but the trimmer had to work out the owner's crude idea. The broad lace is made up in the usual way, except that the cloth is cut through with a half-inch chisel every half-inch of its length, and a strip of patent leather rubbed-down welt, a half-inch wide, is drawn through each alternate cut, thus showing a half-inch of patent leather, then half an inch of cloth and so on; it is then stitched with silk, two rows, one along the edge of the leather welt, and the other just outside of the welt, and then a row along the edge of the lace. It requires a good deal of work, and may be considered too showy for general favor, but I must admit that it looked very well. I give it for what it is worth.



To E. A. H.—*How I make a "Back Boot" for a Wagon without a Back Panel.*

I make them to roll up, and, to do this, I have a stick fitted to the bottom of the seat, just inside of the seat valance, made to screw up with three screws and three notches cut in the top side of it, the same as a rockaway curtain stick; then fit a piece of enameled leather from this stick back to the edge of the back panel; then a three-inch border of enameled leather across the length of the panel, to be basted to the large piece covering the open space where the back panel would be; then a piece for side border to carry the line of the back border all around; now, to the front corner of this side border, stitch a strap long enough to knob on to a screw under the bottom of side panel, and three straps to the back border long enough to knob on to a screw under the *back panel;* then nail three buckled straps, ⅝ wide and 13 inches long, on to the notches of the stick,) same as rockaway roll up straps;) the borders are joined in the corners, and bound on to the main piece. Where the round corner of the side border is, it should have a piece of leather underneath as a lining to prevent its tearing.



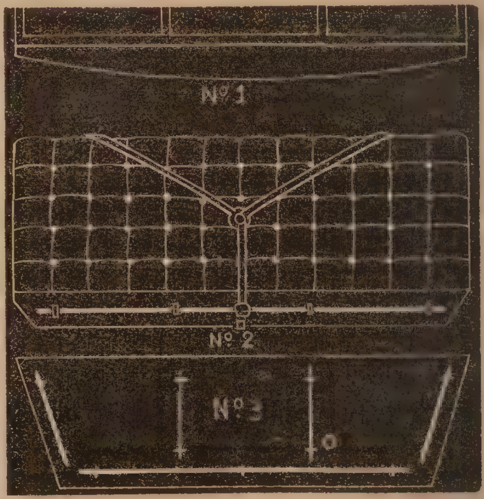
For the Coach-Makers' International Journal.

PORTSMOUTH, VA., April 4, 1870.

MR. EDITOR:—To assist T. Acks I shall give you a plan to trim a light buggy, and will endeavor to be as brief and comprehensive as possible. This style of trimming a buggy is altogether new, and I don't think that any of your readers would have any objection to its publication in the JOURNAL. If it suits you and your readers I shall be amply repaid for all trouble.

TRIMMING.—Brown corduroy, and shall designate the style as "rustic."

FALL.—Cut the buckram to fit the seat, allowing for the rug and oil carpet at the bottom, and roll stick at the top. Paste your corduroy on smooth, allowing enough to turn over at the ends and bottom for a row of stitching. Get the smallest rattan that you can obtain, and flatten it on one side; then cut it off in lengths to suit the fall, leaving a small space between the ends of each piece, as shown at *No.* 3; scive the ends down to a sharp edge, and cover it neatly with mole skin canvas, and let the seam come on the flattened surface. You cannot conveniently use bow leather to cover this rattan, as it is too thick and apt to tear out. In sewing the canvas on the rattan, use a small round needle, and rub the seam down smooth; fasten this rattan on the fall about 1½ inches from the edge by the means of narrow covered tin loops, with short raisers on them creased down elegantly. In placing the rattan on, you must mark a line with your French chalk as your guide, and place it directly over it, *seam down.* You must fasten these tin loops by punching holes through the corduroy and buckram, and pushing them through and bending them down on the under side, as in harness making. Place something flat on the loop close up to the rattan, giving a slight tap with



the hammer, which will secure them properly; then paste a piece of muslin over them, afterwards paste your canvas on the bottom, bring the corduroy over the edge, and paste it down. When dry, stitch a row at the *bottom* with the machine, and *whip* it on at the *ends*. This is obvious, as the cord or ridges in the corduroy run down; therefore you can stitch straight across the bottom, while you cannot on the ends. In fastening the rattan on the fall it will require eleven loops, provided you have two centre pieces; if but one, then nine will answer.

Cushion.—The front facing to be made on the same principle; the rattan to be fastened in the middle of the facing with four of these covered tin loops, as shown at *No.* 2; the outside ones to be near the end of the rattan, facing to be 1½ inches wide after the cushion is made up. In making, *sew the bottom in all around first*, then sew in the *front edge of the top*; turn the cushion, and blind sew in the ends and back, leaving a place open through which to stuff the top and bottom. By this means you keep from bending the rattan; use a bow leather welt, and puff the top in small squares. Cushion strap must be made in the shape of the letter V. A ring sewed in where it forks off about the centre of the cushion, and a buckle in front, see *No.* 2; the forked ends to pass behind the cushion, and nail to the seat. If the job is silver-plated, use a silver ring for the centre of the strap, and the billet end to pass through a ⅝ *perforated* silver harness buckle in front. The strap to be made of thin harness leather, covered with the corduroy, and bound neatly with thin bow leather.

Roll Stick.—Before nailing on the stick, (which must not be more than ¾-inch wide,) take a strip of bow leather, wet, double it and slick down, nail it to the bottom edge of the seat, along the edge of the buckram in the fall; then tack on a strip of corduroy, and nail the stick on over the edge of it, draw your corduroy over the stick, and nail it to the seat. By this means you show a leather welt at the bottom of the roll stick that adds greatly to the appearance of the fall.

Dash.—No flap, cover on both sides, inside with dash leather, outside with bow leather, stitch close to the bars, and draw your bottom thread a little the tightest; by this means you will have the thick and thin leather to meet about equal distance from the surfaces. Don't bind, trim the edges close, put on your dye, afterwards ink, polish until it shines. Cut your hand-holds in the shape of the letter D. The valance to be raised with leather, as shown at *No.* 1.

Rug.—Bind around neatly with bow leather.

Apron.—Made in the ordinary manner with bonnet, with this improvement. Just over the whip socket, paste a piece of leather to the apron, take your compass and mark off a round hole for whip to pass through the apron into the whip socket, stitch around and cut it out, and when you go to sew your bonnet to the apron, sew in a small patent leather flap to fall over this hole when the whip is taken out. If you do not understand how these loops are put in, any harness maker will show how it is done on harness. There is now a buggy before me trimmed in this style, and it makes a tasty appearance.

In my next I will give another plan for trimming, which I will designate as cornice work.

J. Q. A.

It cost $750 to re-line the coach of the Lord Mayor of London.

Columbus, Ky., has 3000 inhabitants and no school houses.

Remedies and Receipts.

To Clean the Teeth.—Rub them with the ashes of burnt bread.

To Destroy Moths.—Lay them in the hot sun. Camphor, cloves and tobacco will keep them away.

Drop Cake.—Nine cups of flour, one pound of sugar, eight eggs, (leaving out the whites;) rose water and nutmeg to your taste.

To prevent mould from appearing on books, ink, paste and leather, apply a few drops of oil of lavender. One drop is enough for a pint of ink.

Poor Man's Pound Cake.—Two cups of bread dough, one cup of sugar, one cup of butter, one egg, a teaspoonful of pearlash, with rose water according to taste.

Mosquitoes.—Wet a piece of sponge with camphorated spirits, and suspend it by a thread from the top of the bedstead, when these *sweet* singers will leave the room.

Cheap Sponge Cake.—Four eggs, three cups of sugar, one cup of milk, one teaspoonful of salæratus, flour enough to make good stiff batter, a little salt and spice, quick oven. Bake it twenty minutes.

To Remove Paint Stains, &c.—Chloroform quickly removes stains from paint, varnish, oils, &c. Another very effective fluid for the same purpose is a mixture of absolute alcohol, 6 parts; liquid ammonia, 3 parts; benzole, ¼ part.

To Preserve Steel Goods from Rusting.—The simplest way of preserving the oxidations of steel goods is to dust them over with quick lime; or, when required to be laid away for several months, should be wrapped in strips of paper which has been freely covered with powdered lime.

To Destroy Rats and Mice.—Take equal quantities of rye meal and unslaked lime; mix them without adding water, placing small quantities in places infested by them. The meal invites them to eat, and the lime creates a thirst, which must be satisfied. They drink, and slaken the lime, which destroys them.

A Cheap Paint for Fronts of Houses, which only needs one coat, stands all kinds of climate; weather, rain, snow or frost will not affect it: Take one pound of flour and make paste; add one pound of boiled glue to it, and boil slowly; when hot put 1½ pint of oil to it, and stir until it is well mixed. Then soak 25 pounds of whiting in water; put size and whiting together and give it any desirable color. The mixture should not be thicker than common whitewash—it is laid on the same as whitewash.

A Simple Deodorizer.—The *Journal of Chemistry* speaks in high terms of the value of coffee as a deodorizer for the neutralizing of foul odors that emanate from organic bodies in a state of decay, as it can be used to advantage where other disinfecting agents would be inadmissible. In cases where rats die in the spaces between the walls of dwellings, the most intolerable odor arising therefrom can be most effectually removed by placing a pound or two of fresh burnt and ground coffee between the floors. For the purification of the sick room it is incomparably superior to the burning of rags, as it has a beneficial chemical action on the atmosphere of the room, and gives besides an agreeable perfume.

Scraps of Humor.

The following dialogue was recently heard in New York in an Eighth avenue car: First young lady—So poor Susan is dead? Second young lady—Yes, poor thing. She suffered terribly, didn't she? And only think, she couldn't wear that beautiful silk dress her mother gave her, and it is too short for her sister.

A Galesburg barber recently shaved off half the mustache of a customer, and then demanded payment of a little bill for former shaves, which he had thus far been unable to collect. The fellow refused to "come down," when the barber turned him out to finish the shave at some other shop.

There is a family of four persons living near Table Grove, who sustain the following peculiar relationship to each other. The family comprises two daughters, two sons, two uncles, two nieces, two cousins, one husband, one wife, one grandfather, one grandmother, one father-in-law, and one son and daughter-in-law.

Frenchman—Madame, you charge ver mooch too big price for zat room.

Landlady—Oh you know we at the watering places must make hay while the sun shines.

Frenchman, (indignant)—Madame, you sall nevare make ze hay of me. You must not zink zat because all flesh is grass zat you can make hay of me.

A few evenings since, as a Newark clergyman was about going to bed, he was summoned by a call from a couple who were anxious to get married. Answering the summons, he found the couple all ready, and, after joining them in wedlock, the husband, with a great flourish, handed him a sealed envelope, and the happy couple went off with the congratulations of the dominie. On opening the envelope, it was found to be entirely empty.

A friend has a little six year older who has just commenced to go to Sunday School. All summer the carpenters have been at work repairing his father's house, a fact which the little fellow probably had in mind on a recent Sunday. He returned from Sunday School very proud at having learned a verse, which he proceeded to recite: "In my father's house are many mansions. If it were not so I would not have told you. I go to *repair* a place for you."

That's What's the Matter with Hannah.—There is a station on the Pittsburg, Fort Wayne and Chicago Railroad called Hanna, in honor of one of the best citizens of Fort Wayne, now deceased. The passenger train stopped there the other day, and the double decked brakeman, thrusting his head inside the door, called out "Hanna," loud and long. A country girl named Hannah, seated about the middle of the car, supposing he was addressing her, and shocked at his familiarity on so short an acquaintance, frowned like a thunder cloud, and retorted, "shut your mouth."

Let's Me and You Get.—An examination of some old letters that remained in a Confederate post office, brought to light this unique love letter. The writer has evidently been taunted by her lover with being "cold," and she vindicated herself very triumphantly in the following modest but sufficient intimation of her desire:

MARRIED.

My Dear:—You say I am cold toward you. Well, now let's prove who's the coldest. Let's you and me get—oh, I hate to write it; look at the top of the letter and you'll find it. Yes, that's it—let's me and you get—oh, you understand me. Affectionately yours, ever.

Miscellaneous.

THE State debt of Missouri is $18,593,000.

THE British government discourages tobacco culture in Ireland.

A POLICE notice has been issued in France informing the public of the danger of using paper colored green with soluble arsenites, and warning the manufacturers that in the event of injury from the poison they will be subject to prosecution.

THE town clock in Sing Sing, N. Y., struck twenty-one times at ten o'clock on last Monday night. One poor fellow, who had been to see his friends, counted the strokes, and declared that he had never been out so late before in all his life, and he did not know what his wife *would* say.

A BALTIMORE correspondent writes: Thunder sours milk and kills oysters. You may load a vessel to its utmost capacity, start for market, and one good round clap of thunder will kill every oyster in the vessel immediately. Pounding with an axe upon the deck of a vessel when oysters are thereon, or pounding upon the side of a vessel with a heavy weight, will kill every oyster that feels the jar.

A REVEREND gentleman in the Alford District, Scotland, who habitually exercises a kindness to birds and animals, receives a daily visit from a robin redbreast. The other day the bird as usual entered his apartment, hopped on to a book in which he was writing, and seized hold of his pen, holding it till writing had to be given up, and some attention paid to the little visitor.

AN Ohio clergyman, several years ago, received a bright new cent as a wedding fee. The other day he met the bridegroom, who mentioned the circumstance, and said: "My wife was a comparative stranger to me at the time we were united in wedlock. I had not learned her value, and paid accordingly. I find her a jewel—so here is an additional fee," at the same time handing the astonished minister a $20 gold piece.

A CELEBRATED author once wrote: A French woman will love her husband if he is either witty or chivalrous; a German woman if he is constant and faithful; an Italian woman if he is dreamy and poetical; a Danish woman if he calls her native country the fairest and happiest on earth; a Russian woman if he holds all Westerners to be miserable barbarians; an English woman if he is of the nobility; an American woman if—he has plenty of money.

POLITENESS IN STREET CARS, STICK A PIN HERE, LADIES.—A car starts off down the street, having within ten ladies on one side, sitting closely, yet comfortably, together, and ten men on the opposite side. Presently one lady gets out; the other nine unconsciously rise a trifle, shake their skirts, and the seat is full again. Further on another lady departs: the eight remaining go through the same process of rising, and, in a twinkling, the seat is still full. A short ride beyond, another lady steps out, leaving seven only, who, by the same sort of spreading, fill the seat again completely. Now enters a lady. On the ladies' side there are three persons less than when the car started, yet not one of the seven remaining moves; and so one of the men on the opposite side gives his seat to the new-comer, and stands during the rest of the journey.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

WANTED.—Every Painter to send $2 for Illustrated Scientific Guide to Lettering and Shading in all the various styles. Address, NEWTON H. MACK, Box 22, Tunkhannock, Wyoming Co., Pennsylvania.

WANTED—The address of the manufacturer of the best Spoke-turning Machines; also Felloes-sawing Machines.

WANTED—The address of any coach painter who has used Thum's Half Elastic Varnish Brushes, and failed to find them superior to any other in the market.

WANTED—Everybody to notice the change of address in Muller's advertisement.

WANTED—Every reader of the JOURNAL to notice carefully our advertising pages, for every good invention and reliable house will eventually be found in this great and popular medium of reaching the craft.

☞ Chicago is the great city of the Northwest, and has *two* large Varnish Factories.
See their advertisements in the JOURNAL.

☞ Only $1 for our splendid office chart.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, for balance of present volume, for 50 cents each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

HARPER, HENRY, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winsted, Conn.

Brush Manufacturers.

*THUM, CHARLES D., 150 North Third street, Phila.

Carriage Body Manufacturers.

EVANS, C., 59 Rosette street, New Haven, Conn.
NORCROSS, H. S., (light,) 1712 Coates street, Phila., Pa.
SHEW, LEVI W., 127 Park street, New Haven, Conn.
TOWNSEND, C. T., 116 Dixwell av., New Haven, Conn.

Carriage Bolt Manufacturers.

*COLEMAN, M. J., 2030 Arch Street, Phila.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDON, A. & M., 22d street, above Vine, Phila., Pa.
*SCOTT & DAY, 38 North Third street, Phila., Pa.
SHIELDS, WM., 23d street, above Race, Phila., Pa.
*SKELLEY, T., 24th st., below Callowhill, Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.

Carriage Castings.

*FITZGERALD & FLAGG, 218 N. Third st., Phila., Pa.

Carriage Wheels.

BROWN, S. N. & CO., Dayton, O.
LA FARGE, I & J., Rahway, New Jersey.
*WOODBURN, SMITH & CO., 2d & Green, St. Louis.

Coach Hardware and Trimmings.

*ATWATER, H., 1625 Market st., Phila.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
HIGH, J. J. & L., 156 Grand street, Rahway, N. J.
KEIM, GEO. DEB., 162 North Third street, Phila., Pa.
KENNEDY & CO., 305 Arch street, Phila., Pa.
*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*ROUSE, J. G. & CO., 4th & Arch sts., Phila.
*SCOTT & DAY, 38 North Third street, Phila.
SNYDER, W. & A. J., 115 North Third st., Phila.
STOTESBURY, J, M., 56 North Third street, Phila.

Carriage Draftsmen.

*MULLER, A., 49½ First street, New York City.
*WERTSCH, G. & CO., 121 Avenue A, New York.

Coachmakers' Tools.

WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

Coach Lamps.

*CAREY & POST, 234 Carter st., Phila., Pa.
*NIXON & WIGLEY, 39 North Seventh street, Phila.

Felloe, Spoke and Shaft Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Fifth Wheel Manufacturers.

HAYDEN & LETCHWORTH, Auburn, N. Y.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*SCOTT & DAY, 38 North Third street, Phila.
*WOODBURN, SMITH & CO., 2d and Green, St. Louis.

Iron Merchants and Manufacturers.

*ATWATER, H., 1625 Market st., Phila.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.

Ivory and Horn Turners.

*ATWATER, H., Agent, 1625 Market st., Phila.
HACKERT & CO., 99, 101 and 103 E. Houston st., N. Y.

Paint and Varnish Brushes.

*FELTON, RAU & SIBLEY, 136 North 4th st., Phila.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*THUM, CHAS. D., 150 North Third street, Phila.

Permanent Wood Filling.

*VALENTINE & CO., Boston, Mass.

Rubber Enameled Carriage Cloth.

*ODORLESS RUBBER CO., 19 Park place, N. Y. City.

Paints, Oils and Varnish.

*FELTON, RAU & SIBLEY, 136 N. 4th street, Phila.
LUCAS, JOHN & CO., 141 North Fourth street, Phila.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., Phila

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

*CROWELL, DAVID, Wood Works, Rahway, N. J.
*HOOPES BROS. & DARLINGTON, West Chester Pa.

Spring Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*GARRETT, KENT & CO,, (Agents,) Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.

Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

*ATKINSON, W. & CO., 1270 Broadway, New York.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

*COLGATE & CO., 401 Illinois street, Chicago, Ill.
*FELTON, RAU & SIBLEY, 136 N. Fourth st., Phila.
*GARRETT, KENT & CO., Wilmington, (Harland's.)
KEYSTONE VAR. & JAP. WORKS, 313 Race st., Phila.
*MINETT & CO., 60 Pearl st., N. Y,. & 7 S. 10th st., Phila.
PARKER & GILLESPIE, 228 Pearl st., New York City.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*SMITH, EDWARD & CO., 161 William street, N. Y.
*VALENTINE & CO., Boston, Mass.

☞ Attention is directed to advertisement of Geo. E. Palmer & Bro., New York City, dealers in Carriage Cloths, &c.

CASH

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY

SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, April 20, 1870.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.25; 1⅛, $3.75; 1¼, $4.50; 1⅜, $5.50; 1½, $7.

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.00; 1⅛, $4.50; 1¼, $5.50; 1⅜, $7.25; 1½, $9.25.
" Improved taper, ⅞ and 1 in., $4.50; 1⅛, $5; 1¼, $6.25; 1⅜, $8; 1½, $10.
" Half pat., ⅞ and 1 inch, $5; 1⅛, $5.75; 1¼, $7.25; 1⅜, $9; 1½, $11.

Axles, Long half pat., ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $8.75; 1⅜, $10.75; 1½, $13.50.
" Plain long taper, ⅞ and 1 in., $5.00; 1⅛, $6.00; 1¼, $7.50; 1⅜, $9.25; 1½, $12.

Axles, Improved taper, long, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10; 1½, $12.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 45 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.50.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.

Buckram, per yard, 15 to 18c.

Carpet, per yard, Brussels, $1.80; Velvet, $2.30 to $2.50. Oil cloth, per yard, ⅞, 45c. to 60c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $1.75; Fast Colored Zephyrs $1.50; Browns, same price.
" body, per yard, indigo wool-dyed, $2.50 to $3.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.10 to $1.50 per dozen.

Damask, German cotton, double width, per piece 30 yds., $14.00; do., Union, $28; English worsted, from $1.50 to $2 per yd; Rattinet, 50c. to 70c. per yd.

Dashes, buggy, per dozen, rough, $18; silver plated, $27. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.15 to $1.75.

Enameled cloth, per yard, muslin, 5-4, 30c.; 6-4, 45c.; drilling, 5-4, 42c.; 48 inch, 45c.; 6-4: 58c.; duck, 5-4, 55c.; 50 inch, 58c.; 6-4, 65c.; pat. tan back muslin, 5-4, 40c.; do., drill, 5-4, 55c.; 48 inch, 60c.; flock drill, 48 inch, 90c.; do., muslin, 80c.; vul. rubber drill, hea., $1.30; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 13c.

Fifth wheels, Cincinnati pat., per doz., ⅝, $14; ¾, $15; N. York pat., ⅝, $11; ¾, $12.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $3.75.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $30.

Leather, per ft., dash, No. 1, 12c.: do., No. 2, 10c; railing, 22c. and collar, 22 cents; enameled top, No. 1, 23c.; do., No. 2, 20c.; enam. trimming, 20c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 4½c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $4.50; 2½ to 3, $5.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
(10 cents off from present prices.)

Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $2.00.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2 15; 1⅛, $2.50; 1¼, 2.65.
" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
" ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.00; 5 bows, $9.00.

Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $13.50
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 14c.; Bright, 15c.; 1¼ inch, 1c. per lb. more.
" Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 22c.; 1½, 3, 4 and 5 plates, not shorter than 33 inch, 21c.; shorter than 33 inch, per lb. extra, 3c.
" Bright oil-tempered, per lb., 1¼ inch, 18c.; 1½ inch, 17c.
" Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top holders, Thomas patent, buggy, $5 each; extension, $7 each.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1 .25; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.25; No. 30, $1.45; No. 35, $1.60; No. 40, $1.80.
" Shoe, H. B., per lb., No. 10, 60c. to 82c.; No. 3, $1.00 to $1.10; No. 12, $1.30.
" dark blue, per lb., No. 10, 90c.; No. 3, $1.15; No. 12, $1.35.
" machine, Marshall's, Shrewsbury, black, No. 432, $2.50; No. 532, $3; No. 632, $3.35; white and black same price.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.45; No. 30, $1.60; No. 35, $1.80; No. 40, $$2.10; white, 25c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.50; black, silver top, $1.75.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.50; buggy, $3.50; post, 2 setts in bundle, $3.75.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash, red oak and common hickory, per sett, 1,
" 1⅛ 1¼, $1.25; 1⅜ $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2. 25 per set.

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in.. $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
" " double " $4.50 "

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in. and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

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VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $9.00; Noble & Hoar's English, $7.50; black enamel English for carriage tops, $7.00; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $5 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., 90c.; No. 1 Prussian, 55c.; No. 2 Prussian, 40c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 12c.

Greens—Pure chrome, L. M. & D. shades, per lb., 18c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 10c.

Reds—Best carmine, No. 40, per ounce, $1.50; fine crimson or claret lake, per lb., $3.00; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 40c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.10; deep, $1.05; Ger. goth. pale, $1.20; deep, $1.10; Chinese, $1.20; Trieste, $1.20; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.

Whites—Pure lead, per lb., 11c.; Colorado lead, 10½c.; Nevada, 9½c.; Dakota, 8½c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 12c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.00; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000, 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

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COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

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PROSPECTIVE HAPPINESS.

How common is the practice to look forward to some future time at which we will begin to enjoy life. At home, and in the shop or place of business, we may be comfortably situated; but, nevertheless, there is a gnawing sensation which craves a something we scarcely know what, and which is seldom, if ever, satisfied. "Take no thought for the morrow," &c., which means to rationally enjoy the present, and take no undue trouble upon ourselves for the future, is not heeded, unless it be by those whose estimate of happiness is so low that they are satisfied to live a lazy, trifling life. This butterfly existence, which provides only for present wants, is productive of beggars and paupers, and cannot satisfy a man who has the ambition of an oyster. What this class of persons imagine to be happiness is similar to that enjoyed by the Hindoo devotee, who tortures himself to please his gods.

The Hindoo holds up his arms until he loses the power to change their position, and until the finger nails grow into talons. He is an idler, and not fit to live among human beings. *Our do-nothing* devotees worship by holding their hands down, for they have not ambition enough to raise them, and strike sturdy blows for their own advancement.

It is not on these we would waste any precious time, but would inquire of ourselves first, and afterward of others, why it is that we do not enjoy ourselves from day to day better than we do, and not be forever postponing to a day far distant, which to us may never arrive? The history of the world proves that it is not in riches and honors alone that happiness dwells, but that, on the other hand, the poor, the very poor and the obscure may possess the larger share. We are honest enough to admit that we do not care to be any poorer, and like all others would not refuse a handsome legacy; so that we are not of that school that preaches to others that the poor man is the only happy one, or that the rich man is the only miserable one. We believe that persons in almost every condition could be far happier than they are if they would strive to be contented, and not covet what others may possess. In the large cities, where extremes meet, we find the most discontent. The poor and the medium classes are thrown in contact with the wealthy, and the contrast in their style of living is so apparent that discontent becomes a chronic complaint with many. Remove the poorer classes to the country, where all are nearer on an equality, and give them no more than they possessed in the city, and contentment will gradually flow in upon them.

The artisan may say, "Oh, don't talk to me about enjoyment. Here I am pent up in a large city, working at low wages, which compels me to live in obscure quarters in a tenement barracks, having no conveniences, my wife is dragged down by hard work, my children have no play ground, and I return from my work weary and disheartened as I climb to the third or fourth story, where are a couple of rooms I call home. When I have the means to rent a small cottage, and live as a man should, then will I begin to enjoy myself."

But should the man who already possesses a cottage home be interviewed, we would doubtless learn that he would prefer a house large enough to give him one spare room, so that he could accommodate his friends when they came on a visit. And thus we fret and worry out of one degree into another, and when we have secured a home of ample dimensions, though of a plain style of architecture, the skeleton may appear—which they say is in every house—and demand that the square windows shall be changed to the bowing style, and the roof be transformed into a "Mansard."

The palace of the millionaire, with its thirty or forty rooms, and grounds which inclose broad acres, ornamented with everything that money can purchase, does not always bring the owner the pleasure he had anticipated; for he is of a like nature with others, and will suffer if he violates natural laws, and then it is no pleasure to him to know that his society is courted because of his wealth, and not for himself alone. Now we firmly believe, that from the poor artisan, dwelling in two rooms, on up to the owner of a palace, the different classes might enjoy much more of life if they would but lose themselves, as it were, in their own homes, and not be over anxious about their more fortunate neighbors, or seek to multiply houses and lands when they have more than enough for all their wants.

The poor man, earning but low wages, should not spend any of his scanty income on anything that does not add to the comforts of himself and family. His rooms, instead of being carpetless, and filled with rickety furniture, might, with a small outlay now and then, soon be furnished neatly, a few good books be added, and after a time pictures, nicely framed, be hung on the walls. Having no foot of ground to improve, the windows may be adorned by a few plants, in pots or boxes, which, if carefully attended, will increase their tiny shoots, and put forth flowers which will be as fragrant as if they were growing in Bessemer's gorgeous conservatory.

The tidy appearance of one's home has much to do with adding to the happiness of the occupants. And now, having made good use of a few things, in time the way will be opened when you shall possess much more.

It is proper to covet the best gifts; that is, to strive to place ourselves in better circumstances; but there is a limit to even this. We do not need to live in grand style, for the money thus spent might be put to better use by opening our hands to the poor, the consciousness of having relieved the wants of others bringing more peace of mind by far than the stupid gazing at stone and wood, dressed in filagree style, and formed into a handsome residence, or at our fine clothes, or anything else in which we may take delight.

But the adage, "that it is easier to preach than to practice," confronts us at every step, and we will be apt to continue as we began in life, to ever reach forward after something beyond our grasp and postpone to a future time that measure of happiness which should be enjoyed from day to day.

GLEANINGS.

Jas. B. Brewster's new Carriage Repository, on Twenty-fifth street, near Third avenue, New York, has the front laid up with the new enameled bricks, which are the ordinary bricks with a porcelain enameled face. The front will be white, with gray quoins and bands. The building is in the Italian style, and four stories high, the first of which is decorated with columns, portico and pediment. The roof is Mansard, with dormer windows and heavy iron cornice. It will cost $25,000. * * C. Schrack & Co., Philadelphia, well known to our readers through the advertising columns, sustained heavy damages by fire on the second day of May. "The contents of their varnish factory at Twenty-fifth street and Girard avenue, were consumed by the upsetting of a pot of varnish, which spread so rapidly that the fire could not be checked." Fortunately they have still on hand a full supply of varnish which was stored in a fire-proof building, so that they are prepared to fill orders without delay. * * Experiment proves that iron rails are more durable than steel. * * England has 500 blast furnaces, which every year reduce 12,000,000 tons of ore to 4,800,000 tons of metal, and which consume 14,000,000 tons of coal. The manufactured metal is worth about $60,000,000. * * The father of Demosthenes was a sword cutler. * * A firm in Chicago have laid out twenty acres in the south end of the city with a private park, and lots fronting on both park and street, and advertise that they are prepared to lease on the popular Philadelphia plan, with the privilege of purchase at the end of ten years at the valuation on which the lease is made. * * The Chinese reproduced impressions from inked or colored blocks of engraved wood as early as the year 1275, A. D. The Germans not until the fifteenth century. * * The terrific hail storm which visited a portion of Philadelphia on Sunday, May 8th, paid its respects to Mr. Jacob Rech's large coach factory at Eighth street and Girard avenue, by shattering two hundred lights of glass. The building being admirably adapted for light and ventilation, presented, on its north and west sides, a large number of glass targets to the ice bullets. * * The contest between the English and American Finishing Varnishes appears to be growing warmer. Noble & Hoare, and Harland & Sons, who represent the English side of the question, are brought face to face with the *Helmboldian* energy of the firm of Valentine & Co., of Boston, the more retiring yet persistent efforts of C. Schrack & Co., of Philadelphia, Colgate & Co., of Chicago, and several others. We are unable to say how the matter will terminate, but do know that there are American manufacturers who are now prepared to furnish an article of a quality so nearly equal to the English that perfection is but a short distance removed. * * W. S. Richardson, Baltimore, Md., has invented an improvement in carriage axles that promises to be a success. * * Chambers Bro. & Co. inform us that the demand for their Bolt Cutter has increased so rapidly since their advertisement was inserted in the JOURNAL, that they cannot fill orders under three or four weeks. So much for a good article and the right medium to bring it to public notice. * * McDermott Bros., Washington, D. C., are doing a good business, and always seem pleased to have their friends call. A stranger is soon made to feel at home in their company. * * Through tickets to Washington cost more than way tickets. Why is this? * * Petry, Guissell & Bayha, St. John street, Philadelphia, are full of work, and are enlarging their facilities for filling their orders. * * J. E. Hemmel is still smiling in single blessedness. Cannot our lady friends in Baltimore get him turned in the right direction. * * Potter's Spoke Tenoning and Peeling Machine ought to be advertised in the JOURNAL. * * Graff & Colby, Baltimore, are enterprising and energetic coach-makers, and are bound to succeed. * * The Sterick wheel meets with general favor. All should try them. * * D. M. Lane's factory, West Philadelphia, is not excelled by any carriage establishment in this city. * * J. W. Hibbs is following in the footsteps of our genial friend in Brooklyn, and double blessings are flowing in upon him. Long may they continue to multiply. * * Palmer's Metallic Plane is being tried in this city by experts, and so far has proved to be all that is claimed for it, and likely to supersede wooden planes entirely. * * Some of the Washington city car conductors have got the big head. * * A. McLear, West Chester, Pa., has the finest shop outside of Philadelphia for miles. * * The consumption of beer in England is one barrel a year for every individual. There are 20,000,000 inhabitants, and 20,000,000 barrels of beer are consumed by them. * * Mr. Watts informs us that the firm of Church & Watts, North East, Pa., is dissolved, Mr. Church having left the country.

☞Send for our new and elegant one dollar office chart; the most elaborate ever before offered for the price.

AN HOUR AT WEST CHESTER.

Since our last issue, business called us to visit the pleasant town of West Chester, 27 miles from the city; and, although our stay was short, we saw much to impress us favorably, both with the place and its citizens.

The Spoke and Felloe Factory of Messrs. Hoopes Bro. & Darlington, being located near the depot, we called, and found Mr. Darlington on hand, who insisted on our going through the establishment, which was certainly very agreeable to us, having heard so much of the perfection and completeness of their machinery. Although they keep a large stock of Chester Co. hickory, (the best that grows,) plank and spokes (in the rough) on hand, their extensive works prove to be far too small to meet the increasing demand. Their spokes are very nicely dressed, and assorted with great care, and such is the reputation gained for spokes and felloes that orders have been and are being filled for Paris, Berlin, Australia and other foreign ports. They also have a large trade in California. Judging from the energy displayed, the kind of timber used, and the perfection attained in producing such extra finished work, the time is not far distant when they will rank among the very largest as they now do among the best in the country.

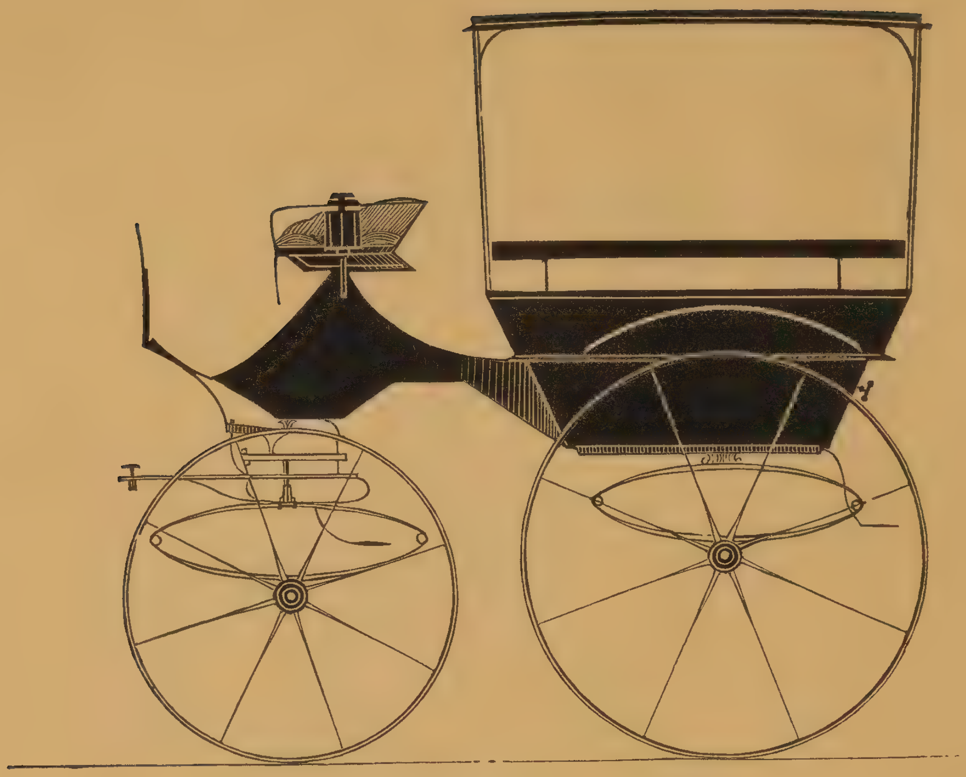
Our purpose being to give a short notice of our visit to West Chester, we have probably dwelt too long on this one establishment; but being so favorably impressed with the concern and its proprietors, we have occupied more space than we designed. We will, however, add, that for honesty, politeness and fair dealing, they are, in our opinion, second to no other firm.

Mr. D. accompanied us to the house of Kirk, Hammond & Co., dealers in Hardware and Carriage Materials, where we found a great variety of goods used in coach-making.

We next visited the establishment of Mr. A. McLear, who has but recently completed one of the finest carriage factories we have visited for some time, outside of Philadelphia, running, when he has a full force, some thirty or forty hands; in fact, we have seen sixty hands employed in a shop of like dimensions. He is certainly deserving of credit, and an extensive patronage, as a reward for the enterprising spirit shown.

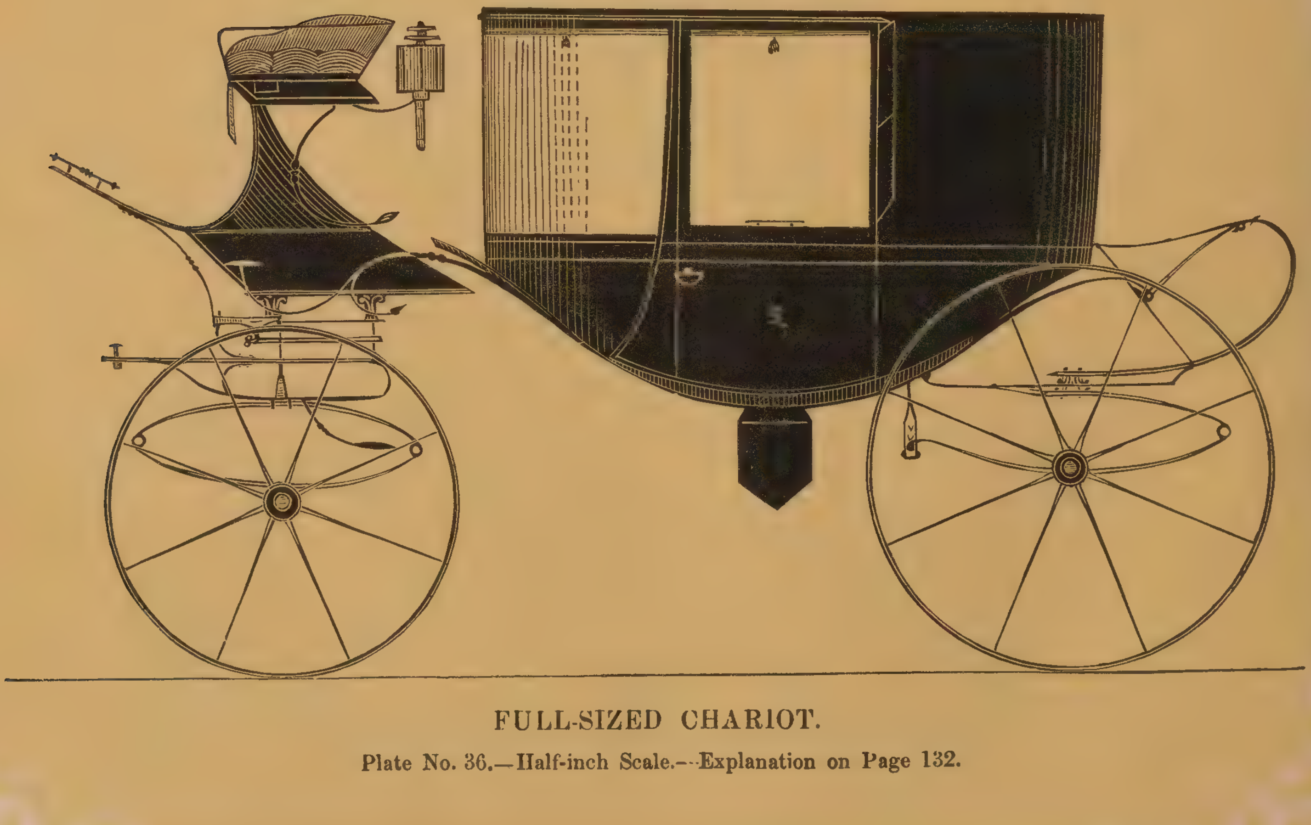
His work compares very favorably with city make, and doubtless commands a good price. The office is very tastefully and conveniently arranged, and among the adornments we noticed that our new office chart graced the walls. The JOURNAL finds a place on his table, and is considered valuable for its many suggestions with reference to new styles, and other matters of practical importance.

Our friend, J. S. Brooks, has also a very good shop, located near the depot. He has established a wide reputation, by the good quality of



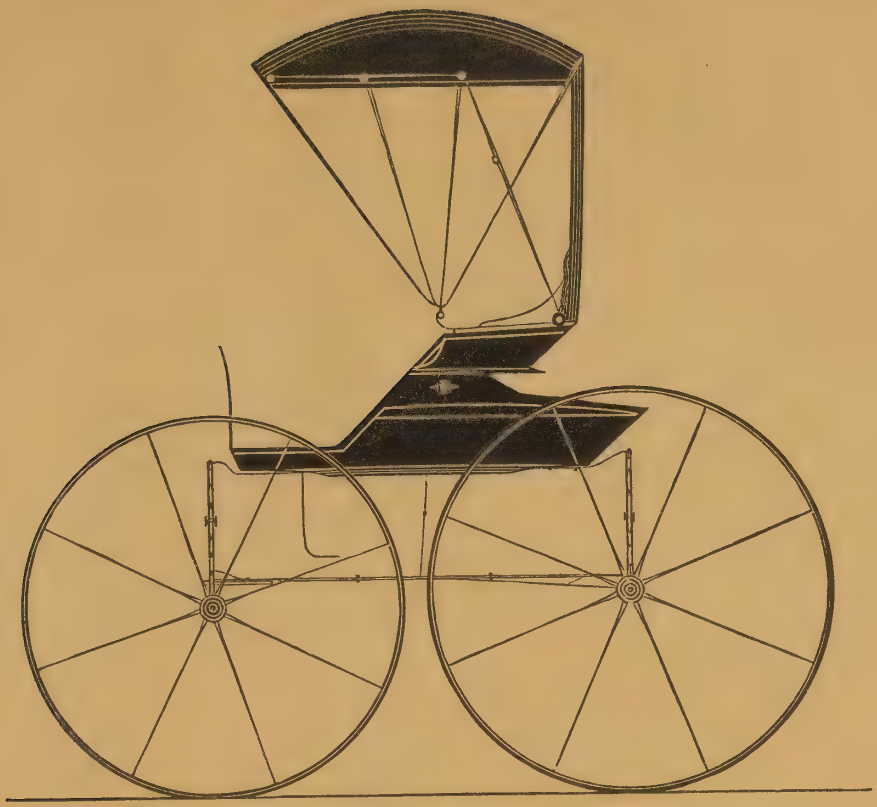
SHIFTING-TOP WAGONETTE.

Plate No. 35.—Half-inch Scale.—Explanation on Page 131.



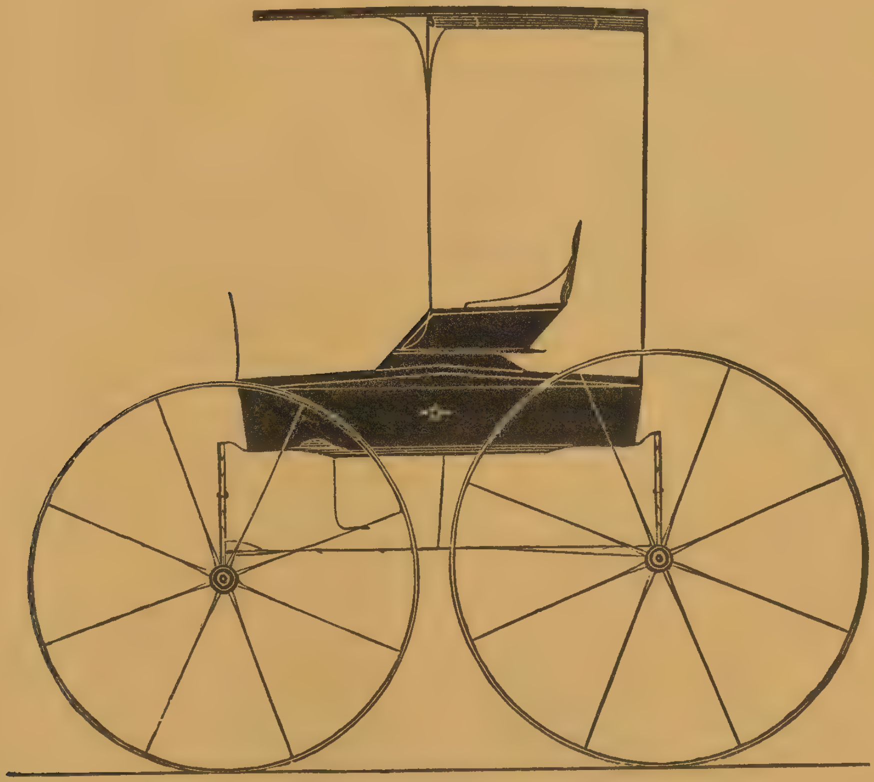
FULL-SIZED CHARIOT.

Plate No. 36.—Half-inch Scale.—Explanation on Page 132.



HAMBLETONIAN.

Plate No. 37.—Half-inch Scale.—Explanation on Page 132.



MONITOR JENNY LIND.

Plate No. 38.—Half-inch Scale.—Explanation on Page 132.

materials used and a studied effort to please; being a practical man, and not at all afraid to work, success has crowned his efforts. With two such establishments, the citizens of West Chester and vicinity are not obliged to seek elsewhere for even the larger and more expensive style of carriages. But here our labors ended, and after partaking of some refreshments, we bid adieu to friend D., and took the train for home, much pleased with the appearance of West Chester, and the thrift and intelligence of its citizens.

ADVERTISEMENTS.

John G. Davis & Son, "Union Spoke Works," in this city, still continue to manufacture, on a very extensive scale, spokes and felloes of the best quality. Lately visiting their new and commodious factory, we were surprised to see the perfection attained within the past few years in dressing and finishing up their spokes. The reputation gained years ago for the quality of their XX spokes is fully maintained. See advertisement.

J. B. Vanhorn's advertisement has appeared in the Journal for the past year, and we desire to call special attention to the advantages to be gained by buying direct from the manufacturer. Although having been located in this city but a little over a year, his experience in the manufacture of goods in his line has been of long standing. An interview cannot fail to impress the buyer that he will get just the kind of goods he orders, which is saying a good deal in these times of fast money making. His patent clamp is, without doubt, well worthy the attention of all engaged in bending wood, saving both time and material. We trust our friends in want of bows, shafts, &c., will remember and send to Vanhorn, Norris and Beach streets, Philadelphia.

E. Jenkins & Sons, Baltimore, Md., we are informed, have the largest and most complete stock of carriage materials in the State. A friendly call lately satisfied us that they were on the alert for business, and suffer no good opportunity to be lost in securing trade; doubtless the Journal has and is still contributing to their continued prosperity. Their card has for years been kept before the readers of the Journal, and we wish them, as was told us by one of our advertisers, who had more than doubled his business in eighteen months, that, "since I have advertised in the Journal, I am kept so busy all day that at night I am so tired I can hardly sleep."

Edward Smith & Co., Manufacturers of Varnishes, No. 161 William street, New York, continue their advertisement. This house, which was established in 1827, has a wide reputation for the uniform good quality of their goods. An experience in the manufacture and sale of varnish, running through forty-three years, has made them thoroughly acquainted with the wants of coach-makers, and they are enabled to supply the trade with the various grades suited to the different classes of work.

C. H. Pardee, Manufacturer of Coach Lace, Fringe, Tassels, Speaking Tubes, Frogs, Tufts, Cord, &c., No. 9 Wooster street, New Haven, Conn., are prepared as usual to supply first-class *new styles* of coach lace and trimmings to match, and all other goods of that character which add so much to the beauty and comfort of a vehicle on the inside finish. Mr. Pardee gives special attention to the manufacture of the articles named, and being a skillful designer, builders may rest assured of being supplied with choice goods.

O. W. Swift, No. 71 Hamilton street, New Haven, Conn., furnishes Coach Glass bent and beveled to any shape. He designs paying more particular attention to this work, and as the beauty of the Clarence, Landaulette, and the new style of rockaway patented by Mr. Ham, of New York City, depend, in a great measure, on the perfection to which the glass fronts are brought, consumers should remember Mr. Swift when preparing to order, and favor him with a share at least of their trade. He manufactures coach and rockaway lamps, curtain frames, whip sockets, &c. See advertisement in back part of Journal.

B. K. Mills, Nos. 56 and 58 Cannon street, Bridgeport, Conn., gives special attention to the manufacture of Coach Laces, Gimps, Tassels, Speaking Tubes, &c. Having visited Mr. Mills but a short time ago, we had an opportunity of examining his products, and so far as we may be allowed to judge, we should pronounce them second to none. We bespeak for him a good trade.

E. K. Wisell, Warren, Ohio, on whom we had the pleasure of calling last spring, is a practical carriage builder, and an inventive genius. He is the manufacturer and patentee of the Wisell lathe, which turns spokes of all sizes, whiffletrees, spring bars, &c. We saw one of these marvelous machines in operation, which performed its work so rapidly and well that we were delighted. See his card in this number.

I. M. Inman, Jersey City, N. J., keeps a general assortment of Transfer Carriage Ornaments, and is prepared to supply the trade with designs, which are well executed and appropriate, at reasonable prices. See outside of back cover.

Geo. E. Palmer & Bro., 15 Park Place, New York City. Carriage Cloths, Cotalines, Satins, Silks, Carpets, Patent and Enameled Leather, &c. This house carries a heavy stock of goods in the line mentioned, and proposes to sell as low as the same quality of goods can be purchased elsewhere. Parties visiting New York to purchase goods should drop in and examine their stock. Orders through their agents, or by mail, will be filled as carefully as were the party present in person.

OUR NEW OFFICE CHART FOR 1870.

We state, without fear of contradiction, that this is the handsomest Office Chart yet published. It is the size of the former one, is printed on heavy lithograph paper, 24 by 30 inches, and contains 28 fashion plates of the latest standard styles. The oval centre is left blank for the insertion of the manufacturer's card. Surrounding the centre is a very elaborate design, forming a richly ornamented border. It is composed of scroll work, enlivened by fifteen human figures, who are represented offering the good things of the land.

The centre piece and border are in gold bronze. Duplicate orders have come in to an extent quite flattering. One party ordered ninety-two, while others have sent for from two up to two dozen. The builder cannot invest a small amount of money more profitably than by purchasing business and office charts, and distributing them judiciously.

Our Office Chart, nicely framed, will attract attention wherever placed, and be a standing advertisement at a trifling cost.

Price, single chart, $1. To insert the card in the same, $2 extra. Five charts, with card in centre, (in color,) sent, post-paid, $6. Six charts, post-paid, *blank centre*, $5.

Sent on a roller to prevent breaking. All orders promptly filled.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "French or Square Rule" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Vol IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted.

Fashion Plates Explained.

SHIFTING-TOP WAGONETTE.

Plate No. 35.—This class of carriage is well suited for use in parks and at the watering places. The passengers sit *vis-a-vis*, or face to face, the entrance being from the rear. It will accommodate eight persons comfortably. The pillars supporting the top are of iron, and are secured at the bottom by two bolts, a foot being formed for the purpose, which rests on top of seat frame. The top may be shifted by removing eight bolts. The weather curtains are not shown in the engraving. Knobs are placed in the roof-rail on the inside, to which they are secured when in use. The curved line on the side represents the wing over the wheel.

Dimensions.—The seats project 3 inches; their width to be regulated by the width of the track, and should clear the wheels about 7 inches on each side. Width of boot: 28 inches. Hubs: 4¾ by 7½. Front band: 3½; back band: 4⅛. Spokes: 1¼. Tire: 1⅛ by 5-16, steel. Axles: 1 5-16, steel. Back springs: 1½, 5 plates, and should be made of heavy steel; front springs: 1½, 5 plates.

Painting.—Body: panels, a rich brown, (Vandyke brown, burnt sienna and lake.) Carriage-part: black, striped broad line of brown, centered with tan color.

Trimming.—Brown morocco, black patent leather welts.

Mounting: gold.

FULL-SIZED CHARIOT.

Plate No. 36.—This plate we may pronounce very handsome. The front and back are designed to have nearly the same sweep. The back quarter has a round corner, the belt is continuous, and passes around at the back corners, having the same sweep as the back quarters. The boot has a plain square lower division; the upper part is rounded, the centre coming in a line at the back with the lower panel. This original style of boot will add greatly to the beauty of this stately carriage. Its appearance is light and graceful, being quite an improvement on the clumsy styles too often given.

Dimensions.—Width of body outside of back: 41 inches. At hinge pillar: 53 inches; lock pillar: 51 inches. Mouldings: ½ inch deep, chamfered. Width of boot: 25 inches. Front hubs: 8 inches by 5¼; back hubs: 8 inches by 5½. Front band: 4 inches; back band, 4¾. Spokes: 1⅜. Tire: 1⅜ by ⅜, steel. We would recommend the use of a deep rim and light tire, which makes a more durable wheel. Axles: 1 5-16, steel. Wheels: 3 feet 8 inches, and 4 feet 2 inches. Track: 5 feet.

Painting.—Body: belt, dark sea green, (English-Dutch pink and Prussian blue, which must be glazed over a ground color of dark green.) Panels: claret, dark shade. Carriage-part: claret, striped, broad line of black, centered with fine lines of milori green, glazed with emerald green or verdigris.

Trimming.—Dark pea green satin. Head lining, quilted; tufts, green and white. Carpet: green, with crimson and white border. Ivory pull handles and card case carved. Speaking trumpet, with ivory mouth piece. Bell pull-handle also of ivory.

Mounting: heavy gold plate. Column pattern of lamps.

HAMBLETONIAN.

Plate No. 37.—An original design, having square corners on seat and body. The arched belt moulding intersects with the front moulding, which passes around the body.

Dimensions.—Width of seat to take 42-inch bow. Seat frame to project over body on sides 1½ inches. Body flared 2 inches on each side. The corner formed by the intersection of the front beveled and horizontal lines should be slightly rounded. This prevents the corner from checking through the spring of the panel. Hubs: 6 by 3½ inches. Front band: 2⅜; back band: 2⅞. Spokes: ⅞. Tire: ⅞ by 3-16, steel. Axles: ⅞, steel. Wheels: 3 feet 11 inches, and 4 feet 2 inches.

Painting.—Body: belt and seat panel, brown; the remainder black. Carriage-part: black, striped with two eighth lines of brown.

Trimming.—Slate colored cloth, light shade.

Mounting: gold. Prop nuts large, and heavily embossed.

MONITOR JENNY LIND.

Plate No. 38.—A very pretty little wagon, with a half lozenge form of belt, which will give another variety of line for the upper part of side panel. The curved lines find many admirers, and we doubt not that the shape here shown will be pleasing. The front pillar iron, having two braces supporting the top. It would be difficult to produce a more showy little vehicle than this when finished in first-class style.

Dimensions.—Width of seat: 36 inches. These dimensions are top of seat frame inside of side panels; these flare 3½ inches, the roof-rail to sweep the same so as to make the pillar stand perpendicular. Dimensions the same as those given for the Hambletonian.

Painting.—Body: belt and seat skirting, carmine; the rest of body black. Carriage-part: black, with eighth lines of carmine.

Trimming.—Brown cloth.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents.*

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "Stray Steps," &c.

CHAPTER XII.

On looking down the hole in the rock, Charlie was discovered standing on a ledge about thirty feet below us, but back from the mouth of the crater-like opening; while every wave which washed in through the opening by which he and the others had entered, seemed to increase the volume of water already in the cave.

"Bear a hand, Fred., with that rope," Charlie sang out as soon as he saw us. "If I stay here ten minutes longer, I will be drowned. That last wave threw the spray all over me." The rope was quickly dropped to him, but he failed to reach it, and we could not set it swinging. It was again hauled up, and a large long stone tied to the end; then when it was down, we took other stones and dropped them down the opening at the stone which was tied to the rope. After several failures it was hit by one of the sailors, and it immediately commenced to swing. Another dropped at the right moment, increased the motion, and Charlie succeeded in seizing hold of the rope. To get him up now was easy enough, and he soon stood on the rock with us. "Boys," said he, "that was a close shave," and even as he spoke the spray rushed up the funnel-like opening as if in chase of its escaped victim. We stood for half an hour watching the now increased volume of spray as it rushed and roared up, thrown twenty and sometimes forty feet into the air, as if an immense fire engine was being worked by giants. The cause of this curious phenomenon is, that the mouth (or sea opening) of the cave is about one-fourth of a mile from the funnel where he stood. This funnel being a sort of valve, when the wave recedes the cave is full of air, but when it comes tearing and rushing into the cave, it fills it "chock" up, and only finds an outlet upward through the small place where Charlie found egress. There is, I believe, another place somewhere on the coast of England where the same kind of phenomenon occurs during heavy gales from the south-east, and it throws a much heavier column up the flume.

But the "nests" were all right, and Charlie swore he was going to have soup after his trouble, or he would know the reason why he didn't. On arriving at the ship, he saw the cook, and fixed it with him. The nests, a big arm full, were taken to the galley and rammed into the coppers, and then covered over with water. The cook, in consideration of the bribe of a bottle of rum, agreeing to add the necessary seasoning, and in about two hours of waiting, anxious waiting on Charlie's part, the soup was declared ready, and it was brought down to be distributed among our mess. All hands nearly had heard of Charlie's adventure in the cave during his trip after the nests, and their curiosity brought them to see and perhaps taste Chinaman's grub. Tin cups were soon dipped into it, and were brought up full of the nastiest, filthiest looking compound possible to imagine. All hands hesitated to go ahead, but Charlie being the champion of the affair swore it just looked bully, and he and two or three others raised the cups and took a big mouthful. The next instant the cups were slapped down. Charlie spluttered his mouthful over the face and clothes of another man. "Oh, by the holy poker, I'm poisoned," "Oh, blarst your eyes, you beggar, I will die," "I'm ruined," and such like expressions amid the roars of laughter of nearly the whole crew. "Oh, I'm blessed," said a gunner's mate "if they hain't been and saved some of the stuff the Rio niggers chucked over 'em to make soup of." He got a puck in the mouth, and in five minutes the officer of the deck had to come below with a squad of marines to stop the free fight. Truth to say the soup was upset, and it did look more like the drainings of an ancient dung heap than anything else; and during the remainder of our cruise the word soup could raise a fight for any-one who used it, and it was used pretty often.

CHAPTER XIII.

Before leaving this beautiful island, I must relate an incident illustrative of the dogged, determined bravery of an English naval captain. During the French war, before spoken of, Captain Willoughby's ship was driven ashore during an attack on the forts. The squadron was driven off on this occasion, and had to leave Willoughby's ship to the mercy of the forts. Almost the whole crew were either killed or wounded, and when she was boarded by the French soldiers, he was found sitting on the capstan with one eye hanging out on his cheek, and one arm broken and useless, he refused to surrender, but sat there singing "Rule Britannia," and finally had to be overpowered, and his pistol wrenched from his good hand.

We were now about to sail from Mauritius, bound across the wide, trackless Indian Ocean for Aden, in Arabia. Thousands of miles of dull, tropical ocean lay between us and our destination, and to attempt a relation of our voyage across this vast track of water would only tire the reader, as there is nothing to interrupt the wearisome monotony of our everyday sameness; scarcely a gale to give us a little excitement, and the only land we see is the small group of islets, called the "Saya de Malha," until we are in sight of Cape Gardefui, at the western entrance to the straits of Babel Mandel, which is the approach to the Red Sea. In approaching Aden and Suez and the Red Sea, we were coming to historic, biblical and famous lands. Here in modern Aden, where the inevitable John Bull holds sway, and rules Britannia and the waves, may be seen swarms of the swarthy Arabians, the descendents of the Patriarchs; indeed, very much descended. The children of the desert here most do congregate, and here the great trade of the East Indies finds a resting place on the long journey; for this is the great coaling depot for all steamers bound from all parts of the East to Suez and thence to Europe. When we arrived, there were twelve steamers and fifty ships in port. What effect the now successful Suez canal will have on this place, I do not pretend to tell. Aden is a fine, safe harbor, well protected from the south-west monsoons, and twice as well protected from an enemy by a fine fort, in which is always kept three years' provisions and ammunition.

Those comical looking Arab sail boats, with a nose in them as long as a piny woods pig's nose, and so narrow, no beam, I wonder how they keep on their keel, and the boys in droves around the ship, squatted on wooden trays like meat trays, and paddle like a big mustard spoon, while their frizzly hair would put to blush a Broadway belle—diminutive idea of a big chignon—in fact, those boys look all head and hair; and, judging from the way they drive their fingers into the wool, I should say they had a nice, ticklish, lively time of it. Now, heave a small piece of money overboard, and see a dozen of them go diving down to the bottom for it, and fighting like devils under water for possession of the coveted prize. Talk about water dogs and Sandwich Islanders, why these fellows would drown the best of them.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

"Who Built the Lightest Wagon Ever Made?"

MR. EDITOR:—The *N. Y. Sun*, of May 4th, has the following notice of a wagon built by Messrs. Brewster & Co., of New York City:

> Messrs. Brewster & Co., of Broome street, have just completed for Mr. Louis Lorillard the lightest road wagon ever made, weighing, without shafts, 77 pounds 8 ounces, and capable of carrying a man weighing 160 pounds with safety.

I dispute their right to the honor of having built the lightest wagon, and I claim the credit for myself, because I built one which weighed but 68 pounds, inclusive of cushions, carpets and straps. This wagon I placed on exhibition at the New York Crystal Palace, where it was destroyed in the great fire which burned up that edifice in 1859. It was 9 pounds 8 ounces lighter than the wagon just built by Messrs. Brewster & Co. I therefore claim that it was the "*lightest wagon ever made.*"

Besides the above, I built a wagon for the well known turfite and "horseman," F. J. Nodine, of Brooklyn City, N. Y., which weighed but 105 pounds, including shafts, cushion, carpets, &c. He used it pretty hard for 2 years, when I sold it for him to this same "Mr. Louis Lorillard." Knowing that your JOURNAL circulates widely through the trade, this information may be interesting to many of your readers, besides it will be giving honor where honor is due. Yours, truly, D. DALY,
Phœnix Carriage Factory, Brooklyn, N. Y.

The manufacture of extremely light and yet serviceable wagons, exhibits great skill on the part of builders; for almost any one may put together wood and iron and produce a wagon that will be strong, because every part is heavy. But in building very light work the relative strength of iron and steel must be taken into the account, as well as to understand exactly where the strain is greatest, and also where there is comparatively none.

As there appears to be a controversy going on as to who has built the lightest buggy, we would be pleased to hear from every section of the country where light work is built, and we will publish the reports in the July number. —[ED.]

For the Coach-Makers' International Journal.

GILDING.

BY J. H. T.

Gilding is the art of spreading or covering a thing over with gold, either in leaf or liquid. There are several methods of gilding, as gilding in water, gilding in oil, gilding by fire, &c.

The Method of Water Gilding.—Water gilding requires more preparation than oil gilding, and is chiefly on wooden works, and those made of stucco, and require to be sheltered from the weather.

A size is used made of shreds, &c., of parchment or kid boiled in water to the consistence of a jelly—sometimes glue is used.

If the thing to be gilt be of wood, it is first washed with this size, put on boiling hot, and then set to dry, and afterward with white paint mixed up with the same size, or Spanish white. Others, again, use plaster of Paris, well beaten and sifted.

This size paint must be laid on with a stiff brush, which is to be repeated according to the nature of the work, as eight or ten times in flat or smooth works, and but six or seven in pieces of sculpture. In the former case they are applied by drawing the brush over the work, in the latter by dabbing it.

When the whole is dry, moisten it with fair water, and rub it over with pieces of cloth if it be on the flat; if not, beat or switch it with several slips of coarse linen tied to a little stick to make it follow and enter all the cavities and depressions. Having thus finished the white, color it with yellow ochre. The ochre used for this purpose must be well ground and sifted, and mixed up with size. This color is to be laid on hot, and in works of sculpture supplies the place of gold, which, sometimes, cannot be carried into all the cavities of the foliage and other ornaments. A lay is also applied over this yellow, which serves for the ground on which the gold is to be laid. This lay, usually, is composed of Armenian bole, blood-stone, black lead, and a little fat, to which add some soap and olive oil; others burnt bread, bistre, antimony, glass of tin, butter and sugar. These ingredients being all ground together with hot size; then lay this composition upon the yellow, being cautious not to put any of this into the cavities to hide the yellow.

The brush used for this purpose must be a soft one, and, when the matter becomes very dry, go over it with a stiff brush, and take off all the small grains that stick out. If you do not do this, you will have trouble when you come to burnish the gold.

To be prepared for gilding, you must have three sorts of pencils; one to wet, another to touch up and amend, and a third to flatten; also a gilding cushion for spreading the leaves of gold on when taken out of the book, which should be covered with buckskin, and covered on one end to hold the gold taken from the book, a knife to cut them, a squirrel's tail or a gilder's tip made of pasteboard and camel's hair to take them up and apply.

You are first to begin with wetting your pencils, by which the last laid on with water is moistened, that it may receive and retain the gold. Then spread your gold on the cushion, blowing upon it to smooth it out, after which cut it the required size; then take it up with the tip and lay it gently upon the parts of the work that are moistened.

If the leaves, as they frequently do, happen to crack or break in laying on, these breaches must be made up with small bits of gold taken up with the repairing pencil. The whole work is then to be smoothed with the squirrel's tail or cotton and finishing pencil, the gold being pressed into the dents.

The work having been thus far gilded must be set by to dry, in order to be either burnished or flatted. Burnishing is smoothing and polishing it with a burnishing tool, which is usually done with a dog's tooth, blood-stone fitted into a handle, or a smooth piece of ivory.

Flatting is giving it a light lick in the places not burnished with a pencil dipped in size, in which a little vermilion sometimes has been mixed. This serves to prevent its flawing when handled.

The last operation is the applying the vermeil in all the little lines and cavities, and to stop and amend any little faults with bits of gold. The composition called vermeil is made of gum guttæ, vermilion and a little ruddy brown color ground together, with Venetian varnish and oil of turpentine. Some gilders, instead of this, use fine lucca or dragon's blood with gum water, and others shellac, &c.

Sometimes, instead of burnishing the gold, they burnish the ground or composition, which, by this means, do not appear so very brilliant as the parts burnished.

The Method of Gilding in Oil.—This operation requires much less apparatus than water gilding. There are several methods of making gold size for oil gilding. Fat linseed is the best. Put linseed oil into leaden vessels made in the form of dripping-pans, so as to be about an inch deep. Expose them to the sun for a few months till it becomes very thick; the longer it stands the better and fatter it will be, and give to gold a greater gloss. If it is almost as thick as butter, so as you may, in a manner, cut it with a knife, it is excellent, and should be carefully kept clean for use.

Take yellow ochre in fine powder, (what quantity you please;) mix it with a sufficient quantity of fat linseed oil, grind them well together, thin it to suit, and put it into a pot; and to keep it from skimming over, put some clear fat oil on top—be sure and keep it covered. Size made in this way will keep good for years.

The remains of colors found settled in the bottom of pots in which painters wash their pencils is very good. This matter, which is very viscid or sticky, is first ground and then passed through a linen cloth, and then thinned with turpentine and a very little fat oil.

When your size is almost dry, but yet is still unctuous enough to catch and retain the gold, lay it on, either whole, if the work be large, or cut to pieces, if smaller, with the knife. As the gold is laid on, pass it over with cotton or some other soft material, and, as it were, incorporate it with the ground; and, after this, mend any cracks that may have happened in it with a short camel's hair pencil, as has been shown before in water gilding.

[TO BE CONTINUED.]

PENCIL RULE & SQUARE

D. BOARD EDITOR.

SCALE DRAFTING.

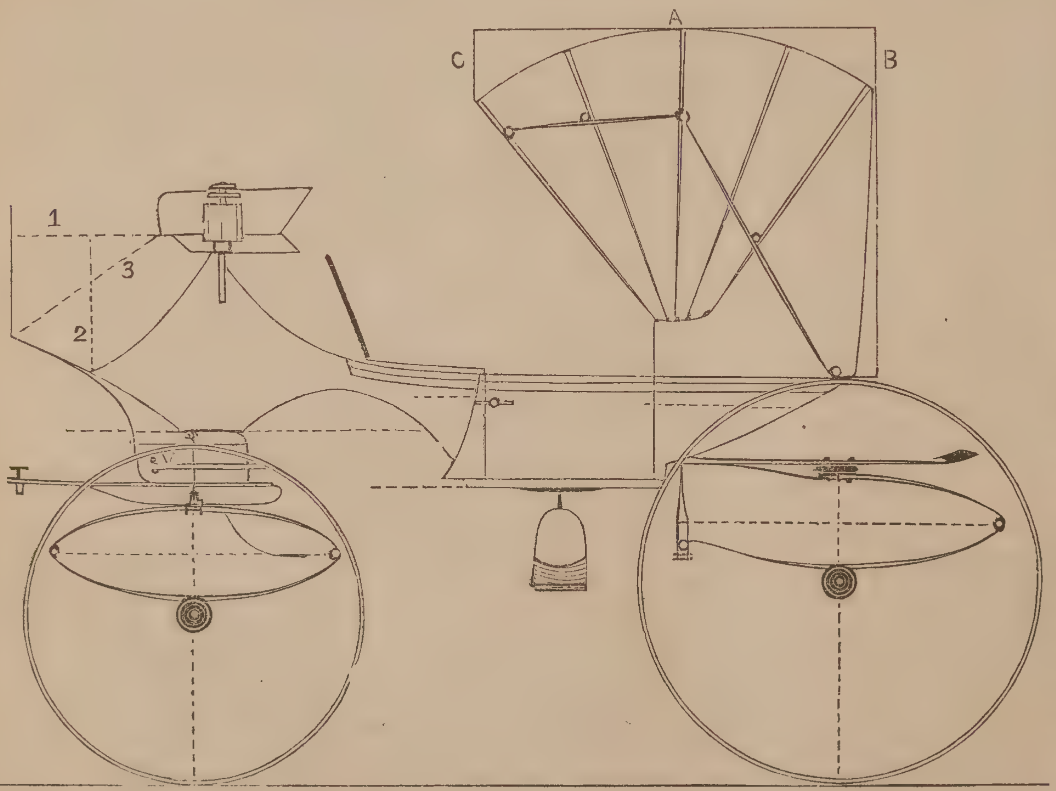
Continued from page 117.

In the April number we gave a Four-seat and Four-spring Phæton, with the working points laid down so fully that we do not deem it necessary to repeat in this number anything heretofore mentioned, but will direct attention to whatever we think will assist the student in drafting the one here given. This shows a SIX-SEAT SOCIABLE.

1st. Draw the ground line, then the base line of body, depth of panel, and establish the height of pump-handle and bottom of boot. The height of seats are shown by the dotted lines. From the seat line, measure 47 inches, and draw top line *A*. Lay out the door and length of back quarter, and draw lines *B* and *C*. *Nos.* 1, 2 and 3 show the height and length necessary for the foot-room. The sweep patterns, which have been given, will furnish all the curves required on this draft. Any further items may be gathered from what has been already published.

As full instructions have been given in the use of India ink, for outline and shading, we shall hereafter give only the outlines of different classes of work, and, at the close of these exercises, give the full manner of applying the colors. New subscribers, who have not received the Scale Drafting from its commencement, and are desirous of having it complete, can be supplied at any time with the back numbers. No apprentice to the body-making, or journeyman who cannot make a nice scale draft, should rest satisfied until this accomplishment shall have been added to his stock of knowledge.

We design completing scale drafting in this volume, giving, at the conclusion, a very full description of the finest colors, both French and English, with the most approved method of applying them. It is a good plan for the body-builder to make a draft to the scale of every body possessing anything novel, preserving them for future reference. The habit once formed, the task will be a light and pleasant one. The time thus spent will bring its reward, if not in dollars, direct, it will come indirectly through the superior skill and fertility of imagination gained by continued practice, which will not fail to show itself on your own work, and be appreciated by the employer.



HAMMER SLEDGE & ANVIL

V. ULCAN EDITOR

HOOPING WHEELS.

(Continued from page 121.)

I have often, with great interest, read communications from your correspondent, or Spoke Shave, editor, as he terms himself. He says he differs with me in the matter of preparing the wheels for the tire, and also in the opening of the joints in the felloe.

I will state, we use nothing but first-class wheels, made by machinery, and are not troubled with any flat places or wind in the felloes; but the plan he speaks of must be desirable for hand-made wheels. He claims that "wheelers, in his judgment, fall into a great error in dressing the tread square with the face of the wheel." I do not think so, and shall endeavor to show the evil results that grow out of squaring the tread with the face of the spoke. He says "I holds that the tire, on its draw, should tend to hold in check the possibility of the wheel departing from its original dish." Now, it is impossible for the wheel to dish back with the tread square with the face of the wheel, if it is properly made with any original dish in it at all.

To illustrate, we will take a light buggy wheel that by running becomes dished back. Now, to turn the dish the proper way, we will take off the tire and shave the felloes, so the front edge on the tread shall be the highest; then put on the tire, and it will dish the wheel back the proper way. This rule will not allow the wheel to dish but a trifle past its equilibrium, and then it will require a practical workman to perform the job, and after it is done it is good for nothing. The tenons of the spokes are strained in the draw of the tire by the twisting of the felloe; also the working off of the tire, together with the kinking of the spokes to relieve themselves from the unnatural lever pressure that they are subjected to, and in a few days it will result in the wheel dishing back again. Now, then, just so far as the working off of the tire, and the over-strain on the tenons of the spokes, together with the unnatural lever pressure spoken of, which they must be necessarily subjected to, is concerned, with the tread of the wheel made square with the face of the spoke, would be just as inconsistent in the new wheel as in the old one, and be just as far removed from durability as light is from darkness. It is just what we desire, to have the tire drawn against the driven position of the spokes. The straighter we can keep the spokes with a good draft the better, for it relieves the strain on the tenon, and gives it to the shoulder of the spoke, and thus the reader will see that my friend must be mistaken in saying that the "draw of the tire is antagonistic to the bearing or strength of the spoke." How can the tenons of the spokes be strained when the draft of the tire is operating against the driven position of the spoke? When I use the term against, I mean with the driven position of the spokes. Against means the straight position it stands in the hub in driving, as it receives the blows from the mallet. Now, the felloe should be put on the wheel so that the draft of the tire should act in unison with the strokes of the mallet, if possible. The rule squaring the tread with the face of the spokes would leave the felloe beveling, and the wheel would measure farther around on the back than on the front edge of the felloe, while there would be no bevel in the tire, and thus would strike the back edge of the felloe first; and while the tire is shrinking, the felloe is reluctantly turning from its natural position to meet the demands of the tire. The tenons on the end of the spokes are cramped back, and all the substance and strength left them in forming the tenon will tend to bow the spoke to the face of the wheel, thereby causing a general strain in every part of the wheel, and the felloe left liable to slip from the tire.

Again, Spoke Shave said he "differed with me in theory as to the jointing of the wheels." He charges me with saying that "the joint should stand open to the thickness of a saw-curf on the tread, and that I did not state the condition of the ends coming together." I will admit that I said the joint should open on the tread, and in the matter of their coming together, I did not care if they were anywhere within the bounds of reason I should open them the same. But the felloe should raise at the joint, as Spoke Shave said, one-eighth or more. Now, let us look at this a moment. In the first place the wheel is intended to be round, and the felloe, acting from the same principle, as an arch, would resist a powerful concussion given to the tread; and where the joints come together, (prepared as I have before mentioned,) when the tires are put on, they will hold in position the felloe all the way round while shrinking, making the wheel enough smaller in circumference to make up for the eighth of an inch taken out of the tread, and will not sink the felloes in the joints, but will keep the same true circle, only some smaller in diameter. Now, if the joints are sawed to form a perfect joint, on heavy wheels they will tend to open on the chin. I have seen them do it very often, and have seen them sometimes act the same in light wheels. Where the chin of the felloes strike first, the pressure becomes great, and lessens on the surface nearing the tread; and while the pressure is so heavy in the chin, it is still supported by the arched position of the felloe; so from any concussion it might receive, it would be supported also by the surface nearing the tread, there would be something for it to fall back upon; while, on the other hand, with the tread of the felloe resting (as you may say) on the points, and open at the chin, there would be nothing for it to fall back upon from any concussion it might receive, save the arching of the wheel. In joints resting on a flat surface, supported by the tire, as in a wheel, are almost as strong as no joint at all. And you will find no better proof of the fact than by refreshing your memory on the old fashioned pieced felloes. There is scarcely an old farmer to be found but that understands this principle that the joints in the felloes must open on the tread, or they are not worth anything. I have often seen carriages with pieced felloes, the wheels having five or six joints in them, that after ten years' service they were all sound, and can Spoke Shave tell me where or when he ever saw a bent felloe, with only two joints, stand the test *that* length of time?

The knowledge of the simple fact we find in the pieced felloes should furnish conclusive evidence to prove to any practical mind the soundness of the matter in question. Yes, you may go back still farther, when V. Ulcan knew nothing about expanding the tire to put it on whole, but used the old fashioned streak tire.

Probably, my friend Spoke Shave never saw them in use, yet when the wheeler prepared the joints for the streak tire, they opened the felloe on the tread. The tire being made in short pieces, some 2½ inches longer than each pieced felloe, so that the ends could be lapped to receive large flat spikes, square and sharp at the point so they would not split the felloe in driving. Those pieces were put on so as to break the joints of the felloe. They were heated and spiked on while hot, then immediately cooled off, and that would draw the open joint on the tread tight together. Thus, we see, that from the earliest settlement of this country, and from the time when our Pilgrim Fathers landed on Plymouth rock, up to the present time, the principle of opening the felloe on the tread, leaving the chin tight, has been practiced by all practical workmen, and the idea of the joint opening on the chin when the tire is on, has been condemned by almost everybody. And the principle governing the wheel in squaring the tread with the face of the wheel, also has been the custom among all prominent workmen. (Spoke Shave admits that himself.) Our Pilgrim Fathers brought the principles with them, and they will hold good as long as there is a wheel suffered to roll.

H. D. F.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 123.)

THE CARRIAGE-PART, OR RUNNING GEAR.

Having, in previous numbers, directed attention to the body only, we will now devote a certain amount of space to the carriage; for in all well-appointed shops the bodies and carriages are painted in separate apartments by a distinct set of hands.

This division of labor is not only productive of more perfect work, it is more profitable to the employer, and, we may add, gives better satisfaction to the employees.

As, in the body room, it is requisite to portion the different parts of the work among different hands, so also in the carriage room there must be a systematic division of labor. We have known employers who would sacrifice a part of their profits on a foreman getting twenty-five dollars a week, to satisfy their whim that a foreman should not be afraid to sand-paper, lead and putty, grind paint, and do other dirty work which could be done as well by an apprentice or a half-way painter, earning from three to seven or eight dollars a week.

In the carriage room, then, there should be those who attend to the rough work, others who color and varnish, and one or more stripers. (We are speaking of factories where several painters are employed.) To secure good and profitable hands, men should be selected to perform those parts best suited to their natural tastes.

A man who may have no taste for striping may make an excellent finisher, and it is not uncommon to find a good striper who cannot, on a carriage-part, lay a passable coat of varnish.

The carriage-part, presenting only narrow surfaces, and the greater part of these convex in form, does not require the time or labor that has to be bestowed on a body. A most important part of carriage-part painting, is to have the work well primed; when the priming is entrusted to careless or inexperienced persons, it is seldom that the wood is coated as it should be. Where the spokes join the hubs and felloes, bare spots will be left, giving the water a chance to soak in and scale up the paint. The after coatings of lead, color and varnish will protect the wood as long as they remain firm; but when they crack, the water will search out the slighted spots, scaling the paint off down to the wood.

Oil lead for priming has, of late years, been replaced by the use of different kinds of what are termed wood filling, which penetrate and fill up the pores of the wood. The carriage-part, after having been primed, should go into the smith shop; and when it returns, if there are any greasy finger marks, remove them, and after a careful sand-papering, dust off and apply the second coat.

In the use of the "Permanent Wood Filling," the puttying would follow the second coat; and when this was dry the color coats would be put on, and the work progress to completion.

The old method is to putty on the second coat of lead, sand-paper when dry, and give a third and sometimes a fourth coat. Whatever plan is adopted, the aim must be to fill the grain perfectly, and produce a serviceable and a perfect finish throughout.

The carriage-part, being more flexible than the body, and required to bear up the weight as well as perform all the rough part of the work, it cannot be expected of it that the painting should wear as well as that on the body. Almost every portion of the carriage-part is brought under heavy strain. The wheels are subjected to severe concussions at times, and the felloes and outer ends of the spokes to the grinding and bruising of gravel and paving-stones. The springs, being composed of separate leaves or plates, and required to be ever changing their position according to the state of the road, the coatings of paint and varnish cannot long remain as perfect as when they were finished. The face edges of the leaves being rounded, there is formed longitudinal grooves between them, which retain more paint and varnish than the faces; and when the springs are in motion, it is apt to flake off.

The coatings on a carriage-part should be possessed of sufficient elasticity to cling firmly to each other, and not be applied so "dead" as to form only an enamel over the priming. The first and second coats should dry glossy, the third and fourth coats "dead," the colors to be laid a coat every day. If both broad and fine lines are to be put on, give the last coat of color sufficient varnish to bear hairing off. On this coat run the broad lines, and when dry give a coat of rubbing varnish. Rub this coat with ground pumice stone and water, and run on the fine lines. Finish on this with a medium heavy coat of American or English Elastic Gear Varnish. All the parts of a coach or carriage should be equally well finished; for nothing detracts so much from the beauty of a piece of painting as to see a well finished body and wheels, while other parts look rough and slighted.

Those parts requiring to be much handled in hanging off, should not be finished until they are on and screwed up, when they may have a touch of the rub cloth, and receive a coat which will not be soiled by finger prints.

Thus, by care and forethought, the job may be sent to the wareroom perfect throughout, giving satisfaction to the employer, and he in turn will feel warranted in recommending to the customer a piece of work equally well finished wherever attention may be directed.

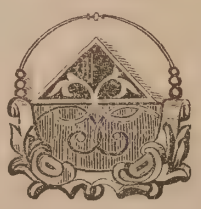
Ornaments.—The accompanying patterns will be found to contain combinations requiring great care in the handling. There are more or less of irregular sweeps in the engravings, which the painter should correct when using the designs. The skillful ornamenter readily detects any defect in the proportions of an ornament, and also sees at a glance wherein an improvement may be made by adding to or taking from the lines before him. And if, in this day of *transferring*, the majority of painters do not put on hand ornaments, the original designer of the transfer, or decalcomania patterns, must attend to all the niceties of drawing and coloring, so that some directing mind and correct hand must produce that which will be pleasing. There are those who look upon ornamenting as a trifling matter, and the ornamenter as a man who wastes his talents on trifles. To such persons we have not a word to say, for breath is too precious to waste on them.

Carriage ornaments should be neat, rich in color, and very finely worked out. Where colors are used instead of gold, the colors should harmonize with the ground color of the panels. It is not necessary to use many colors on a single ornament; different hues of a color always produce a pleasing effect. A very large ornament is in bad taste, except it be for a hackney coach, which is finished gaudily throughout, and designed to attract attention.

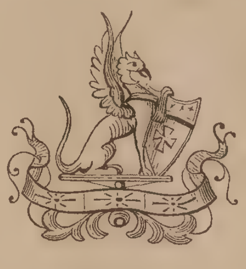
Theorem patterns, bronzed on, are a slander to the trade. We saw, some years ago, a phæton, with a chair-back pattern, in bronze, on the back panel, and wondered why, among *three* persons, there was not *one* of the three who was shocked at the spradling theorem pattern.

The painter, his employer, and the customer were satisfied, and this trio of worthies would doubtless set themselves up as judges of good work.

The first pattern here given was drawn by use of a circle, which was divided in the centre, and the remaining portions added as shown. The upper half of the circle may be left out if desired, producing a circular base and a triangular crest. Lay in the under half in purple, (white, ultramarine blue and carmine,) separate the leafing by shading with clear carmine, high light with pink, (carmine and white.) The triangle filled in with two tints of light blue; the leafing or scrolls, which are within the space, a pale orange tint; outline of triangle and upper half of circle, gold.



The second ornament will be found very appropriate to carriage work. The animal is a species of a dragon, a fabled monster, having the head, neck and wings of a bird, and the body that of a wild beast. He supports a Norman shield. The "fess," or centre point, displaying the Maltese cross.

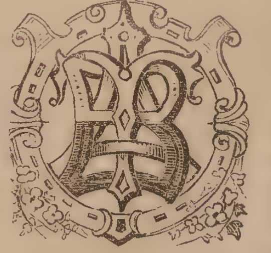


In painting this ornament, secure first a correct outline of the whole, then mix up two or three tints of whatever color you design painting it, having a pencil for each, and a clean pencil for blending the edges, so that there will be no hard lines left on it. Lay on the shaded portions first, and then the half lights, keeping them subdued in tone, so as to allow for the finishing touches showing clear and distinct.

On a claret panel, the whole may be painted in different hues of purple or red; on a dark blue panel, varying shades of blue lighter than the ground work, and so with other colors. The shaded portions must be distinct, and gradually connected with the light portions by lighter tints.

The dragon or wyvern may be painted an ashen gray, the high lights of a warm tint of a yellowish cast. Outline of shield, gold; the upper division, celestial blue; the lower field, a pale orange; the cross, brown, shaded with asphaltum; the wreath, blue and white; the flying ribbon and leafing in gold.

Monogram A B T, (*surrounded by an ornamented garter.*)–Monogram in gold, the under half to be glazed with carmine, darkened with black, and verdigris darkened with asphaltum. The garter, lead color, (white, blue and black,) and lighted with straw color. The lines at the base, a pale brown; the flowers, lilac, (white, carmine and ultramarine blue.)



In giving the colors to be used on ornaments, we do not propose to dictate to those who are good ornamenters.

Tastes differ widely, still we think that carriage ornamenters might improve on the old method of using but one range of colors. Some use a sort of tan-colored tint, and whatever they paint this is used, varied, of course, by light and dark shades, the lights of ruddy color.

The student should experiment with various colors, hues and tints, keeping in mind the effects produced by the mixture of their complementaries, which was fully explained in Vol. IV of the JOURNAL.

CORALLINE.

C. Schrack & Co., varnish and paint manufacturers, 152, 154, 156 and 158 North Fourth street, Philadelphia, are manufacturing an article of rough stuff, or filling, which we have heard spoken of very highly by painters who have tested it.

This firm claims for the "Coralline," that it possesses all the elements of hardness, strength and durability, is prepared on correct chemical principles, and when rubbed down with pumice, presents a fine, hard, smooth and unchangeable foundation for painting and varnishing unequalled by any other substance yet discovered. Being prepared in large quantities, and for a specific purpose, it will always be found *uniform in quality*.

It comes to the painter ready prepared for immediate use, being *finely ground*, thus avoiding a spotted or porous surface, which so often absorbs the varnish after the job is finished.

It dries rapidly, (three coats may be applied in a day if necessary.) It rubs sharp with the pumice, and does not fill the pores of the stone like ordinary filling, thus saving time and labor. When used properly it does not crack, blister or peel.

It is particularly well adapted to doing up *cracked work*, which, by being filled up with the "Coralline," may be made to look as well as new without burning or rubbing off the old paint.

The "Coralline" is put up in tin cans, of one, two and five gallons each. Directions for its use accompany each can.

Send in your orders and give it a trial.

NAVARRE, STARK CO., OHIO, May 1870.

MR. EDITOR:—Will you please inform me how to mix the colors drop black and dark brown? and when there are two or more different kinds of colors on a body do you put them all on before you put on the rubbing varnish, and rub it down? Yours, truly,

A SUBSCRIBER.

ANSWER.—Mix the colors mentioned with one-third oil to two-thirds japan; that is, whatever quantity of black or brown you may have on the stone, they should be mixed up stiff with oil and japan in the proportions given.

After it is ground out, add a small quantity of varnish, mixing it thoroughly through the paint, which will assist in binding it, and will preserve it from drying too dead.

A good quality of English drop black will not require any Prussian blue to deepen its color, or aid in giving more body.

During the extreme hot weather, a larger proportion of oil may be used with safety than the quantity mentioned above. It is best to grind the color without oil, adding it afterward; it is not so liable to become fat or livery.

Browns are composed of black and red, and are light, dark, rich or muddy, according to the nature of colors used. A brown formed of lamp black and Indian red, or drop black and Indian red, or vermilion, will answer for ordinary purposes. The proportions would be one-fourth to one-third red to three-fourths black; if lake be added it will impart a richer tone. See description of fashion plates in this number for a handsome dark brown.

When there are two or three colors to be applied to a body, they may be all carried on by degrees, until the whole is ready for the first coat of varnish, leaving the mouldings to be blacked when the varnish is rubbed down. But with transparent colors it is necessary to use color and varnish in order to paint them solid and clear.

If, on a body, you had a space to be painted ultramarine blue, and another space lake, and the panels were separated by a moulding only, the coatings would have to wait on each other a sufficient length of time to allow them to dry. The black work should progress with the panels, and when each panel color is dry enough to rub, take off the gloss, black the mouldings and other parts, and lay a heavy coat of varnish on the whole body.

A great deal depends on the skill of the painter, and not a little on the size and quality of the brushes made use of.

A skillful workman will seldom drop any color from his brush, and therefore does not fear to lay on black above the panel color. The motler (blender) should be repeatedly turned over, for, in pressing on the side which is in contact with the panel, the color is forced through the hair, and gathers on the opposite side, and will drop if the brush is not changed. Our practice has always been to lay on both the black and colors when the body is taken in hand, aiming to keep the whole surface equally advanced. On bodies which have a black space joining a panel color, with no moulding intervening, it is best to favor the panel color by carrying it a trifle above the true outline of the panel, and straighten the edge with black, after rubbing the first coat of varnish.

In coloring bodies we can only give general rules. If the painter be interested in his work, and properly values *time*, he will study to keep his work moving as rapidly as it will bear, and not cling to any method, old or new, which only satisfies a whim, that is of no real value.

MINNEAPOLIS STATION, MINN., May, 1870.

MR. EDITOR:—Will you tell me how to make hard drying putty that will not swell in nail holes, &c.? Answer in the JOURNAL.

Very respectfully, J. C. C.

ANSWER.—In mixing putty the painter must be governed by the time he may have in which to complete his work. If a body is in hand which *must* be completed in an unreasonably short time, the putty, as well as the coatings, should be mixed without oil, or a very small quantity at most.

The firmest drying putty however, is that which has sufficient oil in it to harden in three or four days. A putty mixed alone with japan, will dry quicker, so as to bear sand-papering, than where oil forms a part of its ingredients; but japan gives a mealy kind of putty, which is apt to shrink, allowing dampness to penetrate it. In the operation of rubbing out the "rough stuff," if the top of the putty is exposed by the action of the pumice stone, sufficient moisture may be imbibed through the putty or around the edges, to cause the nail or screw heads to rust; and where rust forms, the putty will be forced outward.

We are partial to a firm tough putty for holes, which is made by taking pure keg lead, and dry white lead, incorporating them by use of the putty hammer, adding only a small portion of japan.

Having placed, say three pounds of keg lead on the stone, mix thoroughly into the mass a gill of japan, then add dry white lead, (*well pulverized*,) in small quantities, pounding it lightly at first, and when sufficient dry lead has been added to form a mass like dough, use the hammer more freely.

The dry lead will absorb a portion of the oil and japan, and cause the putty to separate in flakes. At this point the practice is common to add either more japan or more oil. This, in our opinion, is wrong. The parts or flakes should be made to cohere by the free use of the hammer, which will, in a short time, produce a compact and tough putty. This putty will keep its place if the panels are properly seasoned, the nail holes well filled with lead, and the putty properly applied. The shrinking of the wood will undoubtedly cause the putty to show, for we have seen work, while standing in the wareroom at one time, show the putty, while the same job, at another time, would present an even surface. Wood-workers, in punching nails and brads, are apt to set them too far beneath the surface, necessitating the use of more putty than should be placed over them.

As is well known, the nail does not enter the wood, but merely crowds the fibres apart, which will tend to assume their natural place again. If the holes are not well filled with lead, the wood around will be more liable to seek its original position, and thus press on the putty, causing it to bulge.

In puttying nail holes, the better plan is to go over them twice, filling them but half full at the first puttying, and completing the operation on the next coat of lead. By this means the putty becomes perfectly hard, and will not be liable to shrink in drying. This plan we always adopt where the nails are set deep.

Some painters contend that putty does not swell under any circumstances, but we are not fully prepared to agree with them. A putty containing an excess of oil, would, we think, be apt to swell under the action of a hot sun.

Putty mixed, half whiting and half white lead, with about the same quantity of japan as given above, will be found very serviceable. Also, keg lead and one-third the quantity of red lead, using no japan, will work and dry well.

We invite correspondence on the subject of putty swelling, and hope our numerous readers will send in their views concerning it.

ALTOONA, PA., May, 1870.

MR. EDITOR:—Will you please give me, through the columns of the JOURNAL, the precise rule to enlarge an ornament. For instance, you have a design, and you wish to enlarge it. I know there is a rule, but I would like to have it laid down plain, showing how it is done systematically. By so doing you will much oblige your friend and subscriber,

J. A. GRACEY.

ANSWER.—You may enlarge an ornament with the dividers, or by the use of squares. In enlarging it is preferable to begin by squaring the pattern, that is, enclose it by straight or right lines. Next draw diagonal lines from the opposite corners, their intersection giving the centre point. Divide the pattern from the centre point longitudinally and vertically. As these lines were those first laid down when the pattern was originally drawn, you are put in possession of the governing points in enlarging to any size you desire. If the pattern be one inch square, and you require it drawn to ornament a space measuring twelve inches square, or one foot, it will only be necessary to produce a square of that size; divide it as laid down above, and with the dividers increase each part of the details of the pattern accordingly.

A readier method than using the dividers or compasses, is to lay off on the outline an equal number of parts, and throw the pattern into squares; the enlarged figure to have a like number of squares. Then number the lines on each, and sketch in the enlarged pattern, so that the lines and spaces cover or pass through corresponding parts of the small pattern.

A design enclosed by an outline on each of its sides, is laid off in twelve or more parts. To enlarge it to one foot, lay off the latter into twelve or more parts. To preserve a fine engraving or ornament from pencil marks, use a frame made of pasteboard or tin, the size of the engraving; perforate it all around, at the points of each division, and insert a silk thread, which, when passed through all the holes, will give the required squares. This frame, laid down on the picture or ornament, gives the guiding lines, and does not deface the pattern.

In this kind of work, a man must possess a quick eye, and a ready hand. Notice the bearing of centre lines, and the large masses, and fill in from these, instead of attempting to put in the details as you progress. Scroll patterns will be found more difficult to enlarge than those made up of right lines, or those combined with curves. Scroll work having such a varying outline, and a large portion of it being drawn according to no particular rule, the attempt to produce an exact copy would be a laborious task. But as a slight change of the parts will not be noticed by the majority of observers, the designer may alter, add to or take from certain portions, provided the general appearance remains. Other methods may be adopted for enlarging, but the use of squares is as plain and expeditious as any we know of. We use only the dividers for small ornaments, which are not to be increased a great deal. Taking the length of the ornament if we wish it as large again, and step it off accordingly; the same manner proceed with the width. Then take the bearing of the centre lines, sketch them, and by the eye fill in the details. We might extend these instructions much farther, but sufficient has been given for all ordinary purposes.

AUSTINTOWN, OHIO, May, 1870.

MR. EDITOR:—Allow me to ask a question or two. What proportion of oil should be used in mixing a brown compounded of Indian red and lamp black, (on which we paint lakes,) so as to be durable?

In mixing lead, (I use keg lead,) how much raw oil should I add to it to make a good wearing lead that will not scale off?

We have quite a number of calls for a color for light buggy gearings, mixed of Indian red and rose pink. What proportion of oil should I use to render it durable?

By answering through the JOURNAL you will greatly oblige a subscriber. A. P. T.

ANSWER.—In our reply to the letter from Navarre, Stark Co., Ohio, the proportion of oil to be used is given, which will cover the questions here propounded in regard to the mixture of colors, and in the article on the painting of the *carriage-part*, under the head of "Art of Coach Painting," will be found the mixture of lead coats.

In the use of raw oil, the painter should understand the nature of the pigments he may have to mix, for oil is influenced in drying by the colors with which it is combined, some of which hasten, while others retard the drying.

Carmine and lakes are among the number of animal paints, which are termed slow dryers. With these and similar colors, the oil must be used very sparingly; or, as in the case of Florence lake, it will not bear a drop.

Lamp black is a fine soot collected from the smoke of burning resinous substances; and, having an unctuous quality, it does not require a great deal of oil.

Vermilion, umbers, red lead, white copperas and verdigris, are all good natural dryers, and admit of the use of one-third to one-half raw oil to two-thirds japan, with the exception of red lead, which will dry firmly when mixed in oil alone.

It is the practice with some good painters to use no oil in the color coats, depending alone on the varnish to impart the requisite elasticity. In the January number, page 57, see an article on "Oils, Japan and Varnish."

WILMINGTON, DEL., May, 1870.

MR. EDITOR:—Please to tell me, through the columns of the JOURNAL, the proper way to varnish a carriage-part, and the way to lay off the varnish. J. H. B.

ANSWER.—The carriage-part should be raised upon trestles, made expressly for the purpose, so that all the wheels clear the floor at least three inches. Wash off perfectly clean, dust, and then place your stool, with cups and brushes, near one of the front wheels, and you are ready to begin the work. Commence on the spokes, laying on the varnish heavily, and carrying it over as many spokes as the varnish will admit. Finishing varnish should be put over all the spokes, or all except one, left as a guide when finishing off. The general practice is to begin at the front part of the wheel, coating first one side of the spokes all the way around, and then the other side, and lastly the back part; the hub may, or may not, be coated at the same time, as suits the convenience of the varnisher. If the varnish has been applied in about equal quantity over each spoke and brushed with a view to leveling it, it will be necessary only to clean out between the spokes, and then draw the brush with a single stroke throughout their length, following up the varnish in the same order in which it was laid on. With the tool straighten up the face of spokes; then level off the hub, finishing it with the point of the brush while the wheel is made to revolve rapidly.

The felloe may be coated between the spokes, finishing each space as you progress, or coat it entire, and finish and clean up the varnish afterwards. A soft, flat brush is well adapted to this part of the work, as it lays on the varnish nicely, and does not require attention afterwards, The faces of the felloe may also be coated with the same brush, being careful, however, to lay on the varnish by keeping the wheel turned so that the varnish will not drop on the spokes. When a wheel is finished, turn it over occasionally until the varnish is set, to prevent it from running. Having completed the wheels, varnish the hind part of the inside carriage, next the front, and lastly the perch and stays; coat the spring bar, springs and axle bed, and then come back and clean out the corners, cross brush and lay off with light strokes with the point of the brush, and so on with the other parts. The shafts should be coated on the bottom as well as top, and the varnish laid off so as to prevent a heavy edge underneath.

A platform carriage is more troublesome to handle, but where suitable devices are at hand to support the parts, the work may be speedily and well done. The wheels should be varnished last, and if arranged so that they can be removed, the inside work can be done quicker and better.

Painters adopt various modes of applying and laying off the varnish, and where equally perfect work is attained, in a reasonable length of time, it is useless to question the method of brushing.

The rule is to lay on a sufficient quantity to *flow* out and present a solid body, connected throughout every part, showing no laps, which is obtained by working quickly, and brushing the varnish as little as possible.

A very thin coat of varnish will not make a good finish, because it has no depth, and an extra heavy coat will not remain brilliant, because it cannot set or harden through equally. A medium between the two is what is required.

SHEARS, NEEDLE & TACK HAMMER

T. ACKS EDITOR

No. 3.

METHOD IN THE TRIMMING SHOP.

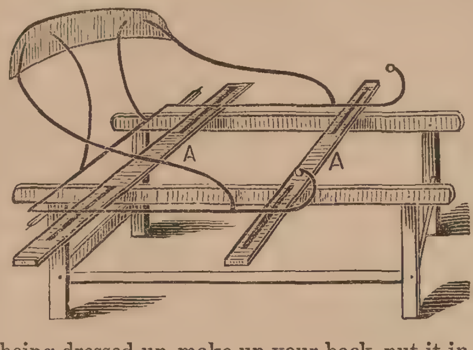
APPLIED TO A TOP BUGGY.

In this class of "shifting rail" work it is rather difficult to lay down a fixed rule of progression, because different shops have each a rule of their own, as to how the trimmer shall manage to work at the job. Some shops always give the body to the trimmer, and let him keep it until it is trimmed; then other shops will not let the body go to the trimming room at all, and we have to put up our tops on the rail alone; with this plan there are some advantages for the shop, because the painter can have the body painted, while the rail and top are getting tailored; but there is an evident disadvantage to our branch in this arrangement; there is in fact a want of *certainty*, to coin a word, in trimming a top on a rail fastened to *anything* but the seat and body to which it belongs; for no matter how careful or particular you may be in setting your rail to a trestle, it may be wrong; while if you have the body, you know just what you are doing, and this fact has made itself so apparent that all or nearly all the large shops here, in New York, arrange it for the bodies to be sent to the trimming shop, and this is as it should be. Although *I* have to trim the rails without the body, yet for that reason I see plainly some of its disadvantages; so trimmers get the bodies, if you can; but presuming you cannot, I will offer you my plan for fitting the rail ready for trimming.

I have a trestle made perfectly level, and a board 1 inch thick and 14 inches wide, and as long as the trestle is wide, screwed fast on top of the trestle; then I have two sticks 3 inches wide, an inch thick, 4 feet long; in each end of these sticks there is a long slit cut for the bolts of rail to drop into, and when the nut is screwed up, the rail is fastened to the sticks, and kept to its right width; then screw the two sticks to the trestle cover.

The trestle, with slotted sticks, marked *A A*, and rail fastened to the sticks, are long enough for almost any width of rail.

Now, with the rail fast to its place, and the buckram for the back ready dry, either set the top, *or get it set*, and while they (the bows) are being dressed up, make up your back, put it in, and then rough out the leather for the top and paste it out; then fit your cushion and fall and carpets; also the seat pocket; paste out the cushion facings and fall, and get them ahead as far as possible; by this time the bows will be dressed up and ready for covering; cover them; nail on your strips to the bows for the head lining to be sewed to; set up your top. To do this *centre* all the bows, then make a mark on one bow for the seam line, and then mark all the others the same distance from the centre. I use leather straps to draw the front bow to its place; a long one, without a buckle, nailed to the bow just below the seam line, and short ones, with buckles, nailed fast to the front of trestle frame. Now put in your head lining, and fit the back and front valence; cover and paste them out. I always put the head linings in before pasting out back valence or inside lace, for the reason that the piece which comes off the width of the cloth in the length of the top is (in roll-up tops) usually sufficiently large to cover the inside lace and valence.



Next put on all your strainers, and if your top leather is dry enough fit it, and while doing so, before you take it off to cut, punch a hole through the side quarters into the bows at the point where the centre of the joint-prop should be. Now take off the leather and cut it, then lay it aside and put on the props, and give the length of the joints, and have them made and filled up by the time you are ready to put on your top. Now cover the dash, because the painters will need it to put on the body before the finishing varnish is put on. In fitting the side quarters for the top, if you stretch it lengthwise, before drawing on, only along the middle, about where it will lay over the bend of the bows, it will fit easier and lay smoother along the seam, and if you strike a chalk line along the bottom edge of the side quarter, before taking it off, you will have a better sweep, and the top will fit more naturally without any tendency to draw *upward between the bows.* When your dash is covered, proceed to draw on the muslin for the stuffing of the top, but first nail on a narrow strip of black muslin along where the bottom edge of the white muslin will come, and when the stuffing is all on and the muslin drawn over it, turn up this strip of black, and paste it over the edge of the white muslin. This is for the purpose of hiding the white stuff when the top is let down.

Now bind the back valence and inside lace and front valence; nail them on, but let the back valence lap a ¼ of an inch lower than the bottom edge of the inside lace. Now fit up the back stays and back curtain by tacking them on to their places on the top. I am aware that some trimmers are in the habit of fitting up these on the bench; that is marking them off for the loops and curtain straps, but I do not approve of the plan, because a top is not like a fixed piece of frame work, and it WILL give or spring more or less; and I have noticed jobs fitted up in this way which came out anything but right. The best way, as a rule, is to fit *everything where it belongs.* Stitch on your loops, rivet in the knobs in the back stays, and line them as well as the curtain. I find it best to tear off a piece the full width of the cloth, just the length of the back curtain; the over width from the curtain will line the stays, and leave a strip for a cushion border. While these are drying, stitch and close your top, and cut off the basting stitches, then hammer down the seam on a smooth hard board, (hammer the wrong side;) then rub very hard with a slicker, and, if convenient, get some one to hold one end of the seam while you rub and stretch it up.

Now draw on the leather, commencing in front, then pull backwards, then again at the front, and tack down to its place. Now put on your joints and stitch the edges of back stays, and then nail them on with 4 or 3 16-oz. tacks, at the inner up edge where the tacks will be covered by the curtain. (Always be careful that the back stays, when up, measure the same across from the bottom inside corner of one to the upper inside corner of the other; if they do not the whole top will look lop-sided;) baste on the stays, and with one needle stitch the side quarters to them; finish the back curtain, baste it on, let it hang loosely, fasten the inside lace to the head-lining, either with paste or by sewing, as described in a former number of this JOURNAL. Now fit the side curtains, and then give the joints to the painter; proceed to stitch (or bind off) the top; when done, unscrew the rail from the trestle and turn the top upside down and rivet the knobs in the rail. Now paste out the side curtains, and while they are drying make up and finish the cushion and fall and carpets; trim the shafts, and make up the side curtains.

And now finish up all small things as prop blocks, whip socket, apron and straps; but before the painters put on the finishing varnish, nail in the seat pocket. Always FINISH up each job completely, so that no part of it will remain undone, to be an annoyance to you when the job is sold and about to be sent away. Do this way, and many a growl with the boss will be saved.

SIDE CURTAINS, WITHOUT KNOBS.

Knobs are going out of use for side curtains. Instead of them a small eye is screwed into each bow just under the edge of the side quarter, and a small hole to fit the eye is stitched in the curtain, and a *small pin with strap fastened to each hole*, just like express wagon curtains. In the front bow two small ½-inch straps are stitched to the curtain long enough to buckle around the front bow. In the back stays knobs are yet used to receive the back part of the side curtains. This plan has the advantage of having no knobs or anything else in view, and obviates the difficulty of the knobs in back bow getting knocked out by the joint when the top is let down.

PORTSMOUTH, VA., May, 1870.

MR. EDITOR—Agreeably to promise in my April communication, I will now describe another method of trimming a light buggy, which I shall style "cornice" work, for want of a better term.

The material of which the job should be trimmed is cloth or corduroy, and is as follows:

FALL.—After cutting the buckram to fit the seat, paste the material on plain, allowing enough around edge to turn under and stitch down.

Get a strip of 1-inch O. G. moulding, and cut it to fit the fall as you would a lace, of course placing it a certain distance from the edge. Mitre it neatly at each corner, and notch the bottom piece in the centre, glue and brad together. You can finish the ends of the moulding by cutting it to a point, or to a sharp edge. Cover this frame by pasting on collar leather, previously made thin; rub and crease it on well, so as to preserve the form of the moulding. The paste used should be stiff, as it is important that the leather should adhere very closely.

When this is dry, paste it on the foundation, and secure it temporarily in place by means of strips of canvas tacked across, and let it go through another drying process. Finally, catch this from the under part by the means of screws placed about five inches apart, passed through small pieces of tin. Be careful in placing in the screws that they do not go through or split the moulding. Draw your canvas under the bottom, stitch down, and run in your stick.

CUSHION.—The front facing is gotten up on the same principle as the fall. The covered moulding to pass down the centre, and held in place by paste and screws. Paste a piece of muslin over the strips of tin and heads of screws to prevent the hair from hitching while stuffing. First sew in the bottom all around, and with it a couple of harness leather straps in the front facing, and let them be long enough to extend to the back of the seat. By this means it prevents them from crossing the moulding. They should loop over screws placed in the seat directly under the button in the bottom, which keeps them from punching a hole through the canvas.

When putting in the top, split the four corners and sew in welt, sew in each end of the cushion a piece cut in the shape of a half circle, which will answer for handles to lift it in and out of the seat. The handles or ears should be made of the same material as the cushion, the under part of canvas with a welt sewed in the the upper edge. The two surfaces should be pasted together. Sew down the front edge of top to front facing, turn cushion and blind sew in the ends and back, leaving the necessary openings for stuffing. When stuffed, puff down to suit taste.

RUG.—Take strips of leather and pink one edge, bind it on so that the pinked edge will lay even around top of rug.

DASH.—Stitch your rows at the bottom, draw on your under piece, cut a very narrow oval raising, paste it where your hand-hold is to be made, draw over top piece, stitch around both edges of this raising, cut out and black. Stitch the other portions of the dash as usual.

Raisings around the hand-holds in dashes make a neat appearance. You can make them in any shape you choose. J. Q. W.

Youth's Department.

For the Coach-Makers' International Journal.

LOUIS AND PETER.

TRANSLATED FROM THE FRENCH.

BY MRS. J. T. GURNEY.

Peter was the son of a poor fisherman. The father of Louis was a rich merchant, who had given up business and was living on his fortune. He bought a magnificent house, with much land, near the village where the fisherman had his cabin. Peter and Louis were of the same age, and when the adventure, which we are about to relate, happened to them, they were about twelve years old.

Peter was a kind obliging boy. Louis was haughty and proud, feeling that he owed nothing to his fellow mortals, nothwithstanding his heart was right, but he had been spoiled. "Papa has plenty of money; one can do anything with that. What need have I of any one?" In consequence of this fine reasoning, he imagined that the little boys of the village were not by any means his equals. Indolent and inactive, his health was as bad as his constitution was delicate; a little wind, a little cold, a little fatigue made him sick.

Peter had, for a long time, helped his father to attend to his nets, and to steer his boat; he could sleep any where, brave the cold, the heat, the tempest, and feared no fatigue; he never ate except when he was hungry, and his food being simple he never took anything into his stomach except what it could bear; thus he was robust, strong and in good condition. Louis, on the contrary, seated at a delicate table, was enticed by a thousand delicacies, and the poor young lad passed alternately from the hands of the cooks to those of the doctors; he took nearly as many medicines as the young fisherman did fish.

The boys had always attended the same school, and had therefore become acquainted. Louis, through his pride, had made himself disagreeable to the scholars, and had it not been for Peter he would have got into trouble more than once. This occasioned a bond between them, which lasted while they were at school.

The son of the fisherman having learned to write and to cipher, left school, in order to help his father. Louis having learned nothing, left also, because his parents concluded that it was not a good school. He was sent to a large boarding school in the city, where, at the end of a year, he could say by heart the fable of the raven and the fox; his parents were in ecstasies. His father was assured that Louis was a prodigy, and Louis believed them. As the latter passed his vacations at home, he had several times encountered Peter in his walks; but when the latter, delighted to see him, attempted to ask after his health, Louis had always some pretext to avoid him. This conduct gave great pain to Peter; his garments were coarse; those of Louis were rich and fine.

One day Louis was walking on the bank of a river, and, slipping, he fell into the water. It was very deep, and the banks offered no help. The unhappy lad knew not how to swim, and made vain efforts to reach the land; already his strength was gone; he could hardly keep himself above water; one minute more and he must have been drowned. Happily a boatman in his shallop had seen him fall, and arrived just as he was yielding to the terrible element. He dropped his oars, and, darting forward, seized Louis by the hair, and dragged him half dead into the boat.

Having undressed him, in order to dry his clothes, Peter, for it was he, took an old cloak, which was on one of the seats, and wrapped Louis in it, and then turned to his oars.

What was his suprise to find them gone! In his haste to save his friend he had neglected to pull them in. They had fallen into the water, and had been carried far off. What to do? The boat was being dragged by the current away from the village, and to add to the danger, a wind set in which also blew it that way. In this situation how many people would have lost their presence of mind? Peter preserved his. He took the rudder and directed his skiff toward a little island, which he perceived at some distance. Happily the current helped him, and in a few hours they reached the shore. Louis, after a while, aroused, awakened by the shock of the boat as she touched upon the shore. "Where are we?" asked he. "Upon a deserted island, ten miles from your father's;" answered Peter. At these words Louis shuddered, and when the young fisherman told him that they would have to pass the night there, he began to cry.

The thought of sleeping without his bed, without supper, in danger of wild beasts, seemed the most horrible accident which could have befallen him. Peter consoled him as well as he could, and assured him that there were no other animals than mosquitoes. When Louis had dressed they went on shore.

They were in a little bay where the fisherman had no trouble in securing his craft. After this his first care was to find a retreat for the night. At a little distance he discovered a suitable place. It was a little spot of earth surrounded by trees, the overhanging branches of which formed an arbor. Having examined it well, Peter ran to his boat for the cloak, a little hatchet and a tinder box which he always carried; with these precious objects he returned and set to work. With several large branches which he cut he arranged a tent, under which he put a large quantity of dried leaves. When this was done he lighted several fires at short distances apart, as much to frighten the mosquitoes as to aid those who would come in search of them. While Peter worked, Louis, full of admiration, but not without shame, looked at him in silence. The activity of the young fisherman set him to thinking; "and he's the one," said he to himself, "that I thought below me. I should have blushed to have given him my hand. His father is poor, mine is rich, but did my father's money keep me from drowning?

And now that we are far from help, of what use are our riches? They have often told me that I was smart. Oh, they deceived me. It is Peter who is smart; what should I do here without him? I am but a child; Peter is a man. O, Peter, I wish to be your friend, and make amends for my past conduct towards you." Thus thought Louis, and two big tears ran down his cheeks. "Why do you weep?" said Peter.

At these kind words Louis was no longer master of his emotion. He threw his arms around the neck of his friend, and embraced him, calling him his friend, his brother. He asked pardon for having treated him with so much pride. Peter was much moved, and, in each other's arms, the two boys on this barren island, without food, but happy and contented, went to sleep.

Peter awoke the first, and rising softly, looked abroad. The birds had left their nests to seek for food, which they found; but man, alas! searched in vain. Sorrowful and thoughtful, Peter took the road towards the water. In the hope of finding some old crusts of bread he looked into the boat. "Ah," cried he, "this will give us a breakfast; a line and hook. I was a fool not to think of it before." He dug some worms for bait, and threw the line into the water. Something bit. "Pull away, my boy," said he, and landed a fine fish. His joy was great, and quickly building a fire he soon had it broiled. "Good," said he, and ran off for Louis. "I am hungry," said the latter upon awakening. "Ah, well, let us eat," said Peter. "Eat what?" "Come with me," said his friend, and showed him the fish, at the same time telling him where he got it. The two sat down with a great appetite, and were finishing the last morsel of what Louis declared to be the best breakfast he had ever had, when a large boat full of men came into the little bay. It was the father of Louis, who, alarmed at his son's long absence, had gone in search of him. The boy was tenderly embraced by his father, who then listened to the story Louis had to tell; how Peter had saved his life, and brought him something to eat. When the narration was finished, Louis begged his father to let him consider Peter as his brother, and share his things with him. Louis' father, filled with gratitude for the service which the young fisherman had rendered his son, prayed him to become his companion and friend. He gave to the boy's father a pretty little house and grounds, where the honest man lived in peace and tranquility for the remainder of his days.

The two boys were afterwards brought up together, and Louis, anxious to follow the example set him by Peter, corrected, in time, his faults, and became like his friend, healthy in body and mind.

Remedies and Receipts.

Lemon and Orange Sugar.—Grate the yellow rind of oranges or lemons to an equal quantity of loaf sugar powdered. Dry it, and keep it for flavoring cakes, pies, &c.

To Stew Green Peas.—Stew a quart of peas, an onion, and lettuce sliced, a small piece of mint, some butter, pepper and salt, very gently for two hours; stir in an egg, beat up and serve.

Fowls.—Hens: If their combs and legs are rough, they are old; if smooth and limber, they are young. Ducks: If young, they will be limber footed; if fat, hard and thick on the lower part of the body.

Harvest Drink.—Mix, with five gallons of good water, half a gallon of molasses, one quart of vinegar, and two ounces of powdered ginger. This will make not only a very pleasant beverage, but one highly invigorating and healthful.

Economy in the Use of Soap.—The washwomen of Belgium and Holland use borax instead of soda, which saves one-half the soap. Refined borax is added to boiling water, in the proportion of one large handful to ten gallons of water.

Ox Feet and Cow Heels are very nutritious. They may be boiled and served in a napkin, with melted butter, vinegar and mustard, or cut in four parts, dipped in egg, floured and fried to a light brown, and serve in a good thick gravy.

To Remove Flies from Rooms.—Take half a teaspoonful of black pepper, in powder; one teaspoonful of brown sugar, and one tablespoonful of cream; mix them well together, and place them in the room on a plate, where the flies are troublesome, and they will soon disappear.

Lemon Syrup.—One pint of lemon juice, one pound and three-quarters of sugar dissolved in the juice by a gentle heat; skim till clear, and then add the rinds previously peeled off; simmer gently eight or ten minutes, and strain through a flannel bag. When cool, bottle tight with sealed corks.

To Clean a Carpet.—Shake and beat it well; lay it upon the floor, and tack it firmly, then, with a clean flannel, wash it over with one quart of bullock's gall, mixed with three quarts of soft cold water, and rub it off with a clean flannel or house cloth. Any particularly dirty spots should be rubbed with pure gall.

Yeast.—A very small quantity of new yeast is sufficient to make the bread rise. In mixing bread, its good quality will depend on the temperature of the water used under the different states of the atmosphere. In warm weather use cold water, when the weather is damp use tepid water, and in cold weather quite warm.

Scraps of Humor.

The most popular woman's paper—a paper of pins.

How can history be believed in, when the very books themselves lie on our shelves?

"Now, my little boys and girls," said a teacher, "I want you to be very quiet—so quiet that you can hear a pin drop." In a minute all was silent, when a little fellow cried out, "let her drop."

A man assigned to a room in the hotel at Sedalia, Mo., found a lady's nightgown that had been forgotten by the lady occupant. He sent it to the clerk with the message: "This is of no use to me empty."

"Go away," said Muggins, "you can't stuff sich nonsense into me. Six feet in his boots! Bah, no man as lives stands more nor two feet in his boots, and no use talking about it. Might as well tell me the man had six heads in his hat."

A doting mother of a waggish boy, having bottled a lot of nice preserves, labeled them, "Put up by Mrs. D——." Johnny, having discovered them, soon ate the contents of one bottle, and wrote on the bottom of the label, "Put down by Johnny D——."

The following letter, which according to sensationalists "speaks volumes," was picked up in the streets of Bloomington, Illinois, some time back: "Dearest C.: Your boots are inside the garden fence, at the southeast corner, under a piece of old carpet. Don't come any more, for my sake. The old man swears he'll blow the top of your head off. Your affectionate B."

A Gallant Hibernian.—In a railroad car the seats were all filled but one, which was occupied by a pleasant looking Irishman, and at one of the stations a couple of evidently well-bred and intelligent young ladies came to procure seats, but seeing no vacant ones were about going into a back car, when Patrick rose hastily and offered them his seat with evident pleasure. "But you will have no seat for yourself," responded one of the young ladies with a smile, hesitating with true politeness, as to accepting it. "Never ye mind that!" said the gallant Hibernian, "ye'r welcom to it! I'll ride upon the cow catcher to New York any time, for a smile from such jintlemanly ladies," and he retreated into the next car amid the cheers of his fellow passengers.

Miscellaneous.

A large number of our contemporaries are noted for the vigor with which, at every dull season, they urge poor fellows, who haven't a dollar in the world, to go West and buy a farm.

The furniture manufacturing company of Bridgeport has contracted to make the furniture for the great hotel now being erected in New York. There are to be 600 ordinary sleeping rooms in the house, and it will require seven acres of carpet to cover the floors.

A Weather Guide.—Two drachms of camphor, half a drachm of pure saltpetre, half a drachm of muriate of ammonia, and two ounces of proof spirits, in a glass tube or narrow phial, will make a pretty sure weather guide. In dry weather the solution will remain clear. On the approach of change, minute stars will rise up in the liquid; while stormy weather will be indicated by the very disturbed condition of the chemical combination.

The Length of Days.—At Berlin and London the longest day has 16½ hours; at Stockholm and Upsal, 16½; at Hamburg, Dantzic and Stettin, 17, and the shortest 7. At St. Petersburg and Tobolsk the longest has 19, and the shortest 5 hours. At Borneo, in Finland, the longest day has 21½, and shortest 2½. At Wanderbus, in Norway, the days last from the 21st of May to the 22d of July, without interruption; and at Spitzbergen the longest day is 3½ months.

In Winding a Watch.—Always be careful to have the tube of the key thoroughly *clean*, picking out any lint gathered in from the pocket, and removing the smallest trace of dust in it. This is very important; the slightest particle of dust may fall in through the key hole and clog some of the delicate works. More watches are injured from this cause, and require frequent cleaning, than from all other reasons. A watch should never be wound or opened when dust is flying in the air, nor should it be opened with soiled fingers. New watches, even of the best manufacture, require a year or so of wear to get all the parts smooth and in proper running order, so that a new watch can hardly be fully regulated to entirely accurate time the first year. The moving of the regulator when very near the right point, is so delicate an operation that a long time is required to adjust it exactly; one may sometimes *chance* to hit it on a first or second trial.

INTERESTING TO RAILROAD TRAVELERS.—The following rules of the road are based upon legal decisions, and ought to be universally known. The courts have decided that applicants for tickets on railroads can be ejected from the cars if they do not offer the exact amount of their fare. Conductors are not bound to make change. All railroad tickets are good until used, conditions "good for this day only," are of no account. Passengers who lose their tickets can be ejected from the cars unless they purchase a second one. Passengers are bound to observe decorum in the cars, and are obliged to comply with all reasonable demands to show their tickets. Standing on the platform, or otherwise violating the rules of the company, renders a person liable to be put off the train. No person has a right to monopolize more seats than he has paid for; and any article left in the seat while the owner is temporarily absent, entitles him to his seat on his return.

THE CONTENTS OF MAY "HUB."—Greetings, The Carriage Trade, Gilding, First Railway Coach, Varnish Items, It's Good Enough, Uncorking Varnish, Why Timber is Painted, Japanese Coaching, Inside Finish for Houses, Carriage Trade in Rahway, Naples Yellow, Pacific Correspondence, London Correspondence, Home Correspondence, Carriage Repairing, New Repair Tariff of Boston, Prize Essay, Coach-Makers' Convention, Timber in Carriages, Our Mail Bag, A Perfect Varnish Job, Light Road Wagon, Rules for Painting, Shrinking of Timber, Blisters in Window Glass, Turnouts a-la-mode, Railway Items, French Monogram, Carriage Items, English Varnish.

G. W. W. HOUGHTON, Editor,
Cambridge, Mass.

Periodicals.

ZELL'S ENCYCLOPEDIA.—Number thirty received, which completes the first volume. Every progressive carriage artisan should subscribe to this valuable work. The total cost, bound, to subscribers, only $27.50. A 50 cent specimen number, containing 40 pages and 78 pictures, will be sent free for 10 cents.

Address, T. ELWOOD ZELL, Phila.

THE TECHNOLOGIST.—Number four at hand. This work is especially devoted to engineering, manufacturing and building. It is replete with valuable matter, treating on a variety of subjects. Health and the workshop in this number gives facts concerned in the preservation of health, which should be read by mechanics throughout our whole country. The use of stimulating drinks is shown to be very injurious, It recommends the setting apart of more legal holidays as the best means of securing to the working classes seasons of exercise and relaxation. Issued by the Industrial Publication Co., 176 Broadway, New York. One copy, one year, $2; single numbers, 20 cents.

THE ART REVIEW, Vol. 1, No. 1, April, 1870, is an exponent of art for the people. Contents: The Flower Angel, Picture Lessons, The Artist's Summer, Music in the Family, Fairy Marauders, illustrated, &c. J. F. Gookins, whose exquisitely painted bouquets, and pictures of Elf-land life, have been so universally admired, contributes to this work. The illustration, Fairy Marauders, represents three little gentlemen of the wood, naughty little elfins, robbing a hum-bird's nest. One fairy, with his sword drawn, confronts the hum-bird, keeping it at bay, while two confederates rob the nest, and carry away the tiny eggs. Carriage painters, especially, should subscribe to "The Art Review." Published quarterly at $1 a year, or twenty-five copies mailed to one address for $20. Address, E. H. TRAFTON, Publisher and Proprietor, 115 Madison street, Chicago.

OLIVER OPTIC'S May number received, and warmly greeted by the young folks, and we might truthfully add by those who are well advanced in life. The frontispiece, Esther Accusing Haman, by Gustave Dore is excellent. Esther, tall and majestic, stands opposite the king, addressing him. Her revelations concerning Mordecai are plainly shown in the withering look of anger the king directs toward Haman, who sits with drooping head, overwhelmed at the disclosure of his deep laid plot against Mordecai. Field and Forest was commenced in the April number, (which, by the way, we have not received, and by mistake sent for the May number.) This promises to be a very entertaining story. Published by Lee & Shepard, 149 Washington Street, Boston, at $2.50 per annum.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

Names will be inserted under any of the following headings, for balance of present volume, for 50 cents each name. Those marked with an asterisk see advertisement in the Journal.

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Carriage Draftsmen.

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Coachmakers' Tools.

WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

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*ATWATER, H., Agent, 1625 Market st., Phila.
HACKERT & CO., 99, 101 and 103 E. Houston st., N. Y.

Paint and Varnish Brushes.

*FELTON, RAU & SIBLEY, 136 North 4th st., Phila.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*THUM, CHAS. D., 150 North Third street, Phila.

Permanent Wood Filling.

*VALENTINE & CO., Boston, Mass.

Rubber Enameled Carriage Cloth.

*ODORLESS RUBBER CO., 19 Park place, N. Y. City.

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PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
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*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
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Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

*ATKINSON, W. & CO., 1270 Broadway, New York.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

*COLGATE & CO., 401 Illinois street, Chicago, Ill.
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PARKER & GILLESPIE, 228 Pearl st., New York City.
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☞ Attention is directed to advertisement of M. S. Hearick, Warsaw, Ky., who offers his establishment for sale.

CASH

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY

SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, April 20, 1870.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
“ snaps, silvered, per gross, $5.25.
Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.
Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
“ Short, solid collar, per sett, ⅞ and 1 in., $3.25; 1⅛, $3.75; 1¼, $4.50; 1⅜, $5.50; 1½, $7
Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.00; 1⅛, $4.50; 1¼, $5.50; 1⅜, $7.25; 1½, $9.25.
“ Improved taper, ⅞ and 1 in., $4.50; 1⅛, $5; 1¼, $6.25; 1⅜, $8; 1½, $10.
“ Half pat., ⅞ and 1 inch, $5; 1⅛, $5.75; 1¼, $7.25; 1⅜, $9; 1½, $11.
Axles, Long half pat., ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $8.75; 1⅜, $10.75; 1½, $13.50.
“ Plain long taper, ⅞ and 1 in., $5.00; 1⅛, $6.00; 1¼, $7.50; 1⅜, $9.25; 1½, $12.
Axles, Improved taper, long, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10; 1½, $12.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.
Basket-wood imitation, for panels, per foot 60c.
Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.
Bolts, Phila., 45 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.25.
Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.
Buckram, per yard, 15 to 18c.
Carpet, per yard, Brussels, $1.50; Velvet, $2.30 to $2.50. Oil cloth, per yard, ⅞, 45c. to 60c.; 4-4, 45 to 80c.
Castings, mall, per lb., 13c.
Cord, seaming, per lb., 25c.
Cloths, lining, per yard, indigo wool-dyed, $1.75; Fast Colored Zephyrs $1.50; Browns, same price.
“ body, per yard, indigo wool-dyed, $2.50 to $3.50.
Coteline, per yard, $4 to $8.
Curtain frames, japanned and silver, $1.00 to $1.38 per dozen.
Damask, German cotton, double width, per piece 30 yds., $14.00; do., Union, $28; English worsted, from $1.50 to $2 per yd; Rattinet, 50c. to 70c. per yd.
Dashes, buggy, per dozen, rough, $18; silver plated, $27. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.
Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.
Drugget, felt, per yard, $1.15 to $1.75.
Enameled cloth, per yard, muslin, 5-4, 30c.; 6-4, 45c.; drilling, 5-4, 42c.; 48 inch, 45c.; 6-4: 58c.; duck, 5-4, 55c.; 50 inch, 58c.; 6-4, 65c.; pat. tan back muslin, 5-4, 40c.; do., drill, 5-4, 55c.; 48 inch, 60c.; flock drill, 48 inch, 90c.; do., muslin, 80c.; vul. rubber drill, hea., $1.30; imitation rubber drilling, heavy, 48-inch, 50 cents.
Felloe plates, wrought, per lb., 13c.
Fifth wheels, Cincinnati pat., per doz., ⅝, $14; ¾, $15; N. York pat., ⅝, $11; ¾, $12.
Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.
Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.
Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.
Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
“ Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $3.75.
Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.
Lamps, per pair, fine, $15 to $30.
Leather, per ft., dash, No. 1, 12c.: do., No. 2, 10c; railing, 22c. and collar, 22 cents; enameled top, No. 1, 23c.; do., No. 2, 20c.; enam. trimming, 20c.
Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.
Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.
Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
“ spoke ten. machine, each, sm., $15; large, $25.
“ bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.
Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.
Moss, per lb., 10c. to 15c.
Name plates, per do., en., German silver, $4 to $4.50.
Nails, lining, japanned and silver, 4½c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.: do., pin head. 33c.
Ornaments, real silver, $2.50 to $4.50 per gross.
Sand paper, flint, per ream, best, 0 to 2, $4.50; 2½ to 3, $5.
Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.
Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.
“ improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.
Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
“ Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.
Scrims for canvassing, per yard, 14c. to 18c.
Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
“ Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.
(10 cents off from present prices.)
Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
“ Clapp's patent, $1.50 per sett.
Shaft rubber, per dozen pairs, $2.00.
Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.
Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2.15; 1⅛, $2.50; 1¼, 2.65.
“ close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
“ close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.
Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
“ ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
“ neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6.
“ Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.
Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.00; 5 bows, $9.00.
Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $13.50
“ Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
“ plated, short, $1.20; 1 long iron, $1.37.
“ japanned, short, 55c.; 1 long iron, 62.
Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 14c.; Bright, 15c.; 1¼ inch, 1c. per lb. more.
“ Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 22c.; 1½, 3, 4 and 5 plates, not shorter than 33 inch, 21c.; shorter than 33 inch, per lb. extra, 3c.
“ Bright oil-tempered, per lb., 1¼ inch, 18c.; 1½ inch, 17c.
“ Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.
Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.
Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.
Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.
Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.
Top holders, Thomas patent, buggy, $5 each; extension, $7 each.
Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.25; Thomas' wrought with plated nuts and rivets, $1.35.
Thread, pat. linen, Stuart's, per lb., No. 25, $1.25; No. 30, $1.45; No. 35, $1.60; No. 40, $1.80.
“ Shoe, H. B., per lb., No. 10, 60c. to 82c.; No. 3, $1.00 to $1.10; No. 12, $1.30.
“ dark blue, per lb., No. 10, 90c.; No. 3, $1.15; No. 12, $1.35.
“ machine, Marshall's, Shrewsbury, black, No. 432, $2.50; No. 532, $3; No. 632, $3.35; white and black same price.
Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.
Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.45; No. 30, $1.60; No. 35, $1.80; No. 40, $$2.10; white, 25c. per lb. extra.
Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,
Tufts, per gross, common worsted, 18c.
Twine, tufting, per lb., No. 16, 50c.; best mattress, 85c.
Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 1C, $5.
Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.
Whip sockets, improved, all black, per dozen, $1.50; black, silver top, $1.75.
Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.
Whip socket fasteners, $3.00 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.50; buggy, $3.50; post, 2 setts in bundle, $3.00.
Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
“ ash, red oak and common hickory, per sett, 1,
“ 1⅛ 1¼, $1.25; 1⅜ $1,50; 1½, $1.75.
Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
“ sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.
Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2.25 per set.
Poles, hickory, per dozen, rough, $12: finished, $16.
Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
“ sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.
Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.
Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
“ “ double “ $4.50 “
Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.
Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.
Seat arms, per dozen pairs, $1.25.
Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.
Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.
Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $9.00; Noble & Hoar's English, $7.50; black enamel English for carriage tops, $7.00; black enamel American for carriage tops, $3.
PIOTROWSKI'S PERMANENT WOOD FILLING, $5 per gallon.
PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.
Blues—Pure Chinese, per lb., 90c.; No. 1 Prussian, 55c.; No. 2 Prussian, 40c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 12c.
Greens—Pure chrome, L. M. & D. shades, per lb., 18c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 45c.; pure Paris, 45c.; Brunswick, 10c.
Reds—Best carmine, No. 40, per ounce, $1.50; fine crimson or claret lake, per lb., $3.00; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 40c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.10; deep, $1.05; Ger. gotn. pale, $1.20; deep, $1.10; Chinese, $1.20; Trieste, $1.20; Italian, 45c.; American, 35c.; Eng. Ven., 5c.; red lead, 15c.
Whites—Pure lead, per lb., 11½c.; Colorado lead, 10½c.; Nevada, 9½c.; Dakota, 8½c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 12c.
Yellows—Pure chrome. L. M. & D. shades, per lb., 35c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,
Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.10; English filling, per lb., 15c.; English rubbing stone, 13c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c.; 00. 75c.; 000. 85c.; 0000, 95c.
Varnish—0, 75c.; 00, 85c.; 000, 95c.: 0000, $1.10.
Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.
Best Paint Mills—Large, $8; small, $6.50.

COACH-MAKERS'
International Journal,

PUBLISHED MONTHLY.

THE LARGEST AND MOST COMPLETE WORK OF THE KIND IN THIS COUNTRY.

TERMS.

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I. D. WARE, Editor and Publisher,

OFFICE: No. 413 CHESTNUT STREET. **P. O. BOX 2769, PHILADELPHIA.**

RAHWAY WOOD WORKS.

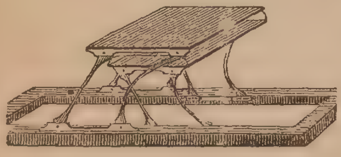
RAHWAY, NEW JERSEY.

SPOKES,
RIMS, SHAFTS, POLES, &C.,

MANUFACTURED OF

Extra Quality New Jersey Hickory and White Oak. Spokes on hand of Seasoned Timber, turned to any required pattern, and finished at short notice. Send for price lists.

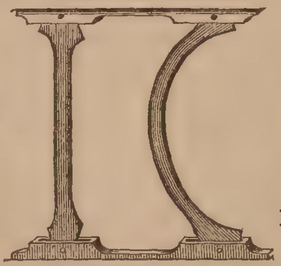
DAVID CROWELL Rahway, N. J.



The above cut represents the

Mellinger Patent Jump-Seat

When adjusted for a single seat.



The above cut illustrates the

Mellinger Patent Jump-Seat

When arranged for two seats.

The attention of Carriage Manufacturers and Dealers is respectfully requested to

THE "MELLINGER" PATENT JUMP-SEAT,

Which is acknowledged, by competent judges, to be altogether *superior* to any other jump-seat in use. Both ends of the legs or supports being accurately fitted in sockets, imparts to the "MELLINGER" PATENT JUMP-SEAT great strength and steadiness, whilst it entirely prevents any lateral motion or *rattling*. These seats are especially adapted to Buggies Jenny Linds, Rockaways, Germantown and Station Wagons. May be readily attached for use as jump-seats, or as single or double seats in the ordinary way. For Circulars, containing price lists, &c., apply to, or address

FITZGERALD & FLAGG,

SOLE MANUFACTURERS,

No. 218 North Third Street, Philadelphia.

The Great Wisell Lathe

(UNEQUALED,)

TURNS SPOKES OF ALL SIZES,

Whiffletrees, Spring-bars, Hammer, Sledge, Pick, Plow and Yankee Axe Handles, Plow Beams, Wagon Axletrees, &c.

E. Y. WISELL.

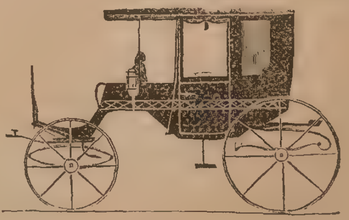
Manufacturer and Patentee, at Warren, Ohio.

FOR SALE.

A rare chance at Warsaw, Ky., for a Carriage Maker with a small capital to secure a good location and a good trade already established. Those wishing can learn the particulars why I wish to sell, &c., by addressing

M. S. HERICK,

March 19, 1870. *WARSAW, KY.*



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COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 10. JULY, 1870. $3.00 PER ANNUM Always in Advance.

THE NUMBERING OF THE PEOPLE.

The numbering of the people, or census, to ascertain the numerical strength of the able-bodied men, as a preparation for war, comes to us through divine authority. B. C. 1490, the Lord commanded Moses to number Israel, and appointed by name a prince from each tribe to assist him. This occurred in the wilderness of Sinai, on the first day of the second month in the second year after they were come out of the land of Egypt. In this registry of the tribes, the Levites were exempted from either paying tribute or serving in the army, and none were numbered who were unserviceable, whether through age or infirmity.

The command to Moses was "to take the sum of all the congregation of Israel after their families, by the house of their fathers, with the number of their names, every male by their polls."

"From twenty years old and upward all that are able to go forth to war in Israel. Thou and Aaron shall number them by their name, &c." The command was obeyed, and as the reports were handed in from the different tribes, the great captain rejoiced, no doubt, to find his people increasing so rapidly, the aggregate showing an army of "six hundred thousand and three thousand and five hundred and fifty."

Having as yet no permanent abode, there was no necessity for statistics other than that which had a bearing on their conquest of Canaan. Moses was looking forward to the promised land, and with the "numbers" before him he was prepared to assign the tribes to their camps, put the host in proper training, as well as to ascertain their genealogies in order to the division of the land by lot.

In ancient Rome the census was an authentic declaration made before the censors by the citizens of their names and places of abode. This declaration was registered, and contained an enumeration of all their lands and estates, their quantity and quality, with the wives, children, domestics, tenants and slaves of each citizen.

In the United States, the census is an enumeration of the inhabitants of all the States, taken by order of the Congress, to furnish the rule of apportioning the representation among the States, and the number of Representatives to which each State is entitled in the Congress. But as the government desires statistics of the increase or decrease of the products of the country, and other items of value, we find those charged with taking the census are supplied with forms, which include several schedules or inventories.

The census now being taken will exhibit the number of inhabitants, mortality reports, productions of agriculture, manufactures and social statistics. We are now a people with a fixed form of government, and in possession of vast domain divided into States, which differ widely in their climate, soil and productions. In the more sterile portions, we find the residents have been compelled to turn their attention to manufacturing and trading. In others, the mining interests are predominant. The great West and South are engaged principally in agricultural pursuits, and throughout our entire country there is a busy hum of hundreds of different occupations which are adding to the wealth of the government.

And then emigration is pouring in upon us, and filling up the places made vacant by the late war, and it will be important to know how much the war has impeded our increase in the last decade.

The census will enlighten us upon the various industries of the country, showing to what extent they have been profitable, and thus give direction to investments in the future.

The basis of representation in Congress will be greatly changed by the addition to the number of voters from the ranks of the colored citizens, and the political complexion of the different States be determined by a correct registration of the actual number of legal voters. A laborious work lies before the "*princes*" who have been appointed to aid in the numbering of the people, and collect such other information as the schedules demand.

The report will probably show a population of 40,000,000, and give evidence of the unbounded resources of our country, and thus stimulate emigration from all nations, so that by the year 1900 we will have attained a population of 80,000,000 or more.

Well, we hope to hear a favorable report, but whatever may be divulged we will be better prepared to act from the data obtained. We wish the largest freedom for all classes and conditions of men, and the removal of all hindrances to the advancement of those who labor.

GLEANINGS.

The steam power employed in the United States is equal to the labor of 130,000,000 men. It is computed that there are 10,000,000 workingmen, thus giving us a working force of 140,000,000. * * A. P. Taylor, carriage-maker, at Austintown, Ohio, sustained heavy damages by fire on the 19th of May. The shop building was 72 by 76 feet, three stories high, contained valuable machinery, and was filled with work about completed. His residence, and a portion of his household goods, and among them the back numbers of the JOURNAL, were also consumed. The loss he estimates at $10,000. He is now residing at Mineral Ridge, Ohio. * * Our old friend, R. M. Harrison, carriage striper for B. Bruce & Co., Elm street, Cincinnati, Ohio, recently sent us a club of twenty-two names from that shop, and promised to do better for us at the next attempt. We consider *that* a very handsome club. B. Bruce & Co., we learn, are very busy. * * The firm of

Bryant & Stulen, Towanda, Pa., was dissolved last fall, since which time Mr. Henry Stulen has built a three-story brick carriage factory, 25 by 70 feet. Mr. Bryant continues the business at the old stand. Mr. Stulen reports business as opening briskly; he employs ten hands. * * Chicago has one of the largest telescopes in the world. It will aid in making a new catalogue of 250,000 stars in connection with nine chief observatories of Europe and America. Its share will be 25,000 stars. * * Don't fail to read the new advertisements, which appear for the first time in this number. They are *bona fide* ones, *and not copied from somewhere, and inserted gratuitously to make a display.* * * The pleasuring season is upon us, and would it not be wise to cut down some of our needless expenses, and take our wives and little ones away occasionally from the drudgery of home, and let them breathe the fresh air in the woods or on the streams? Painters should not confine themselves too closely. Take a day now and then, and you will make money by it.

NEW ADVERTISEMENTS.

DRISCOLL'S SCREW KNOB is something that cannot fail to meet with general favor. Each box contains a wrench for screwing them in. Mr. Driscoll, being a practical trimmer, understands fully the wants of the trade, and has succeeded in producing a knob suited to single or double curtains, and with different length screws, so as to reach through heavy leather or lining. He has also finished a knob for railings, to fit the oval or round iron, with wrought shank for riveting. These knobs are all finished equal to the English knob, the japan being manufactured expressly for this work, at heavy cost, and in our judgment, the samples shown us at the manufactory are superior in finish to any English knob we ever saw. Mr. Driscoll personally superintends their manufacture, and the least defective knob is thrown aside, so that every box contains perfect knobs only, and by his process in manufacturing, the screw is kept entirely clear of japan. Messrs. Kemper Brothers, 168 Main street, Cincinnati, are the sole agents for their sale.

COMSTOCK, BOOTH & CO., Columbus, Ohio, present the claims of the Graham Patent Seat in this number of the JOURNAL. There are *many* reasons why this seat should come in general use, and so far as we can see, *none* to the contrary. It makes a better looking job; it is more durable, having no joints to open; it paints better; is a stronger seat every way; no heavier than other seats; and, what is more important, saves the manufacturer from $2 to $5 on every job. To see these seats is to like them.

Most patentees or manufacturers place too heavy a price on articles in which they have exclusive control, but we are pleased to note this exception, for how machinery can be so perfected to turn out seats, with this amount of work on, for the price, we cannot conceive. We shall take occasion to speak of this seat again at some future time, for we believe it merits all that can be said in its praise.

HUBLEY, ADAMS & CO. are the principal manufacturers of Carriage Bolts in the Iron City, and are, we are informed, furnishing the trade with an article equal, if not superior, to the celebrated Philadelphia Bolt.

SINGER, NIMICK & CO. manufacture very extensively Elliptic, Platform and Seat Springs; also, Axles and Steel Tire.

Possessing ample facilities for manufacturing, large means, which give them a decided advantage in conducting their business, and a thorough knowledge of the requirements of the trade demanding their products, this house offers inducements equal to any who furnish the same quality of goods. They manufacture every description of articles in their line, and all orders sent will meet with that promptness which is often so desirable to the builder. Read their advertisement headed SHEFFIELD STEEL WORKS.

MORRIS & RUTAN, Spring Manufacturers, have made for themselves an enviable reputation for good springs. Mr. Rutan attending practically to their manufacture, is a sufficient guarantee that every set will be handled with care, and satisfaction guaranteed.

AHLBORN, NECKERMAN & CO. are among our Pittsburg manufacturers, devoting their whole attention to making Carriage Axles, and from recommendations given us by the trade in Pittsburg, and the general appearance of things at their factory, we should say they were justly entitled to their full share of trade. The proprietors are men not afraid to work, and having a practical knowledge of the business, will generally be found among their operators, directing and superintending the same.

COLEMAN, RAHM & CO. probably do as heavy a business as any other establishment in Pittsburg in its line, which is saying a good deal; for here, in this city of smoke, we find our very heaviest iron houses. Although manufacturing extensively goods outside of carriage-maker's, their attention has been given of late to the manufacture of springs and axles, and a superior article of steel tire. We feel assured the trade will find it to their interest to patronize this house, known as the "Duquesne Iron and Steel Works."

SILVER & DEMING'S MANUFACTORY, Salem, Ohio, is one of great interest to coach-makers, not only in the making of the late Mr. Dole's inventions, but both gentlemen being inventors, and understanding the wants of the trade, some labor-saving machine is being occasionally added to the list they furnish. This establishment is decidedly a coach-maker's machine works, and all inquiries sent there will meet with prompt attention. Having become personally acquainted with the members of this firm, we feel assured in saying that all orders will be filled with great care, and satisfaction guaranteed in every case. We shall, as occasion requires, and for the benefit of our readers, give illustrations of their machines, when we will give a more detailed description of their establishment.

ROBERTS & PHILLIPS, No. 116 North Third street, Philadelphia, dealers in Carriage Hardware and Coach Trimmings, whose card will be found on the margin of second page of our advertising columns, are doubtless already familiar to a large number of our readers. This house keeps a very carefully selected assortment of goods in their line, and propose to sell at the *lowest prices.* Having an extensive knowledge of the business, secured by a careful study of the wants of the carriage trade, their stock will ever be found suited to the varying wants of customers.

COLGATE & CO., Chicago, Ill., Manufacturers of Railway, Carriage & Implement Varnish and Japan, write us: "they have realized the advantages gained by advertising in the JOURNAL," and we credit their assertion, from the fact that they have ordered another space, namely, the left-hand margin of the front cover. Having, in the outset, determined to put no varnish on the market before it was fully ripened, their success, although appearing to be tardy, came at length, with the prospect of being permanent, because built on a proper foundation.

HOOPES BROTHERS & DARLINGTON, West Chester Spoke Works, West Chester, Pa., have enlarged their advertisement, which please see.

CINCINNATI INDUSTRIAL EXHIBITION.

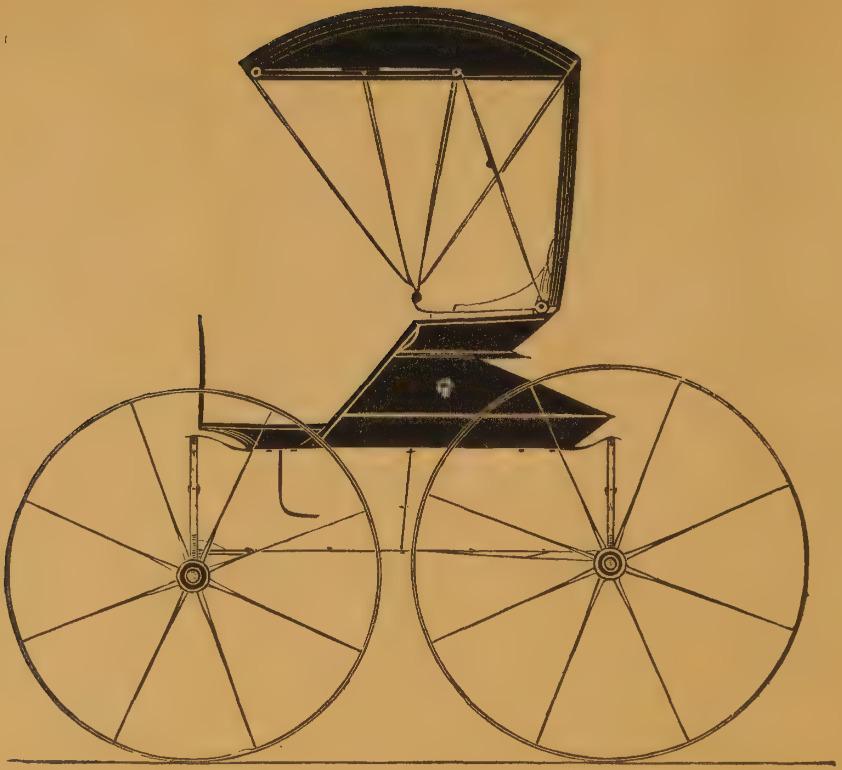
TO BE HELD IN CINCINNATI, SEPT. 21, 1870.

We recently received a circular, and rules and regulations of the Cincinnati Industrial Exposition, from which we extract sufficient to give our readers an idea of its intent.

The Exposition will be held under the joint auspices of the Chamber of Commerce, the Board of Trade, and the Ohio Mechanics' Institute. Manufacturers, mechanics, artists, agents, inventors and others are invited to contribute their skill, ingenuity and taste to this Grand Exposition, and make it a true index of our nation's greatness in the march of civilization.

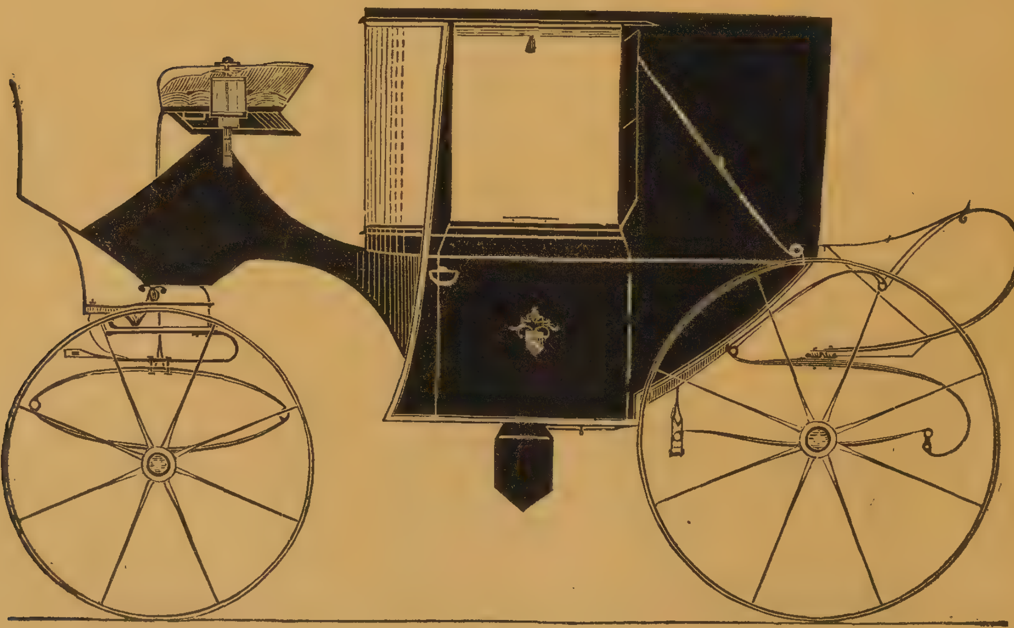
It is the earnest desire of the managers to make this Exposition of Art and Industry superior in point of attraction and practical benefit to all concerned to any display of a similar nature which has ever been held in this country. A commodious exhibition building will be erected, of dimensions to give accommodations to the largest demand that may be made for space.

The most ample arrangement will be made with the various railroads, steamboats and other lines to transport visitors and articles intended for the Exposition at the most favor-



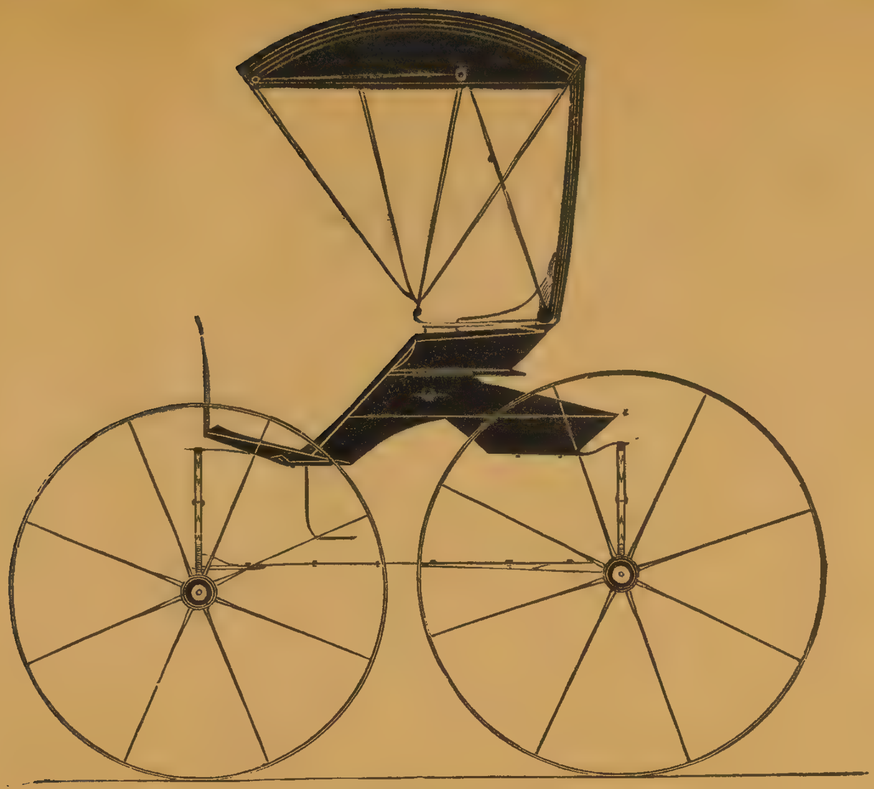
YACHT FRONT BUGGY.

Plate No. 39.—Half-inch Scale.—Explanation on Page 147.



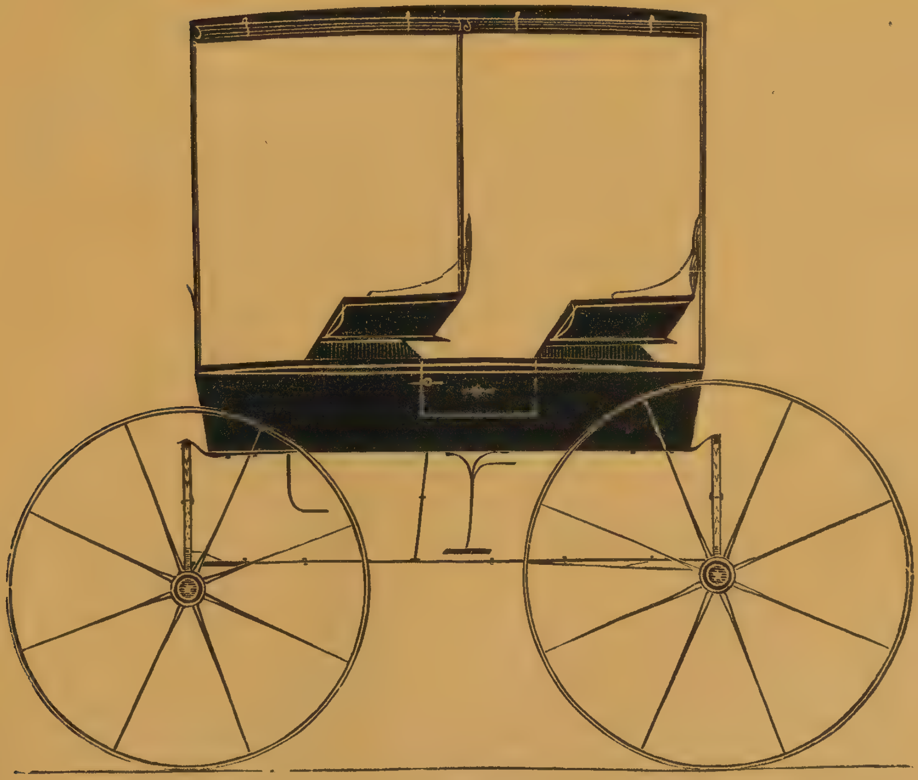
DEMI-LANDAULET.

Plate No. 40.—Half-inch Scale.—Explanation on Page 147.



DICKENS BUGGY.

Plate No. 41.—Half-inch Scale.—Explanation on Page 148.



FOUR-SEAT STANDING-TOP WAGON.

Plate No. 42.—Half-inch Scale.—Explanation on Page 148.

able rates, full particulars of which will shortly be published.

The premiums and awards will be of the most ample character, both in number and quality.

Circulars containing full and specific information relating to the Exposition may be obtained by addressing

Cincinnati Industrial Exhibition,
Cincinnati, Ohio.

NOTICE.

Persons who are subscribers to the Journal, and desire their address changed, will please state where the Journal was last sent. We cannot remember the names of every subscriber and turn immediately to his former residence, and therefore are often compelled to spend considerable time in tracing up the matter.

The form may be similar to the following: "My Journal heretofore mailed to———— you will direct hereafter to————.
Yours, &c., —— ——."

PETERS' ADJUSTABLE DASH.

Geo. M. Peters, of the firm of Peters, Benns & Co., carriage-makers, Columbus, O., has secured letters patent for an adjustable dash, made of two sheets of iron put together with a packing between them to prevent rattling. The iron is pressed so that the dash presents a perfect imitation of the leather covering an iron frame.

We were shown the sample, and were well pleased with its general appearance, and think they will eventually supercede the present leather dashes. We have the sheet-iron seat perfected, and in general use—now the sheet-iron dash is about to be brought before the public, doubtless with equal success, and we understand parties are experimenting on a sheet-iron body, which, if successful, will give us an iron wagon throughout, except wheels and shafts.

Mr. Peters is an enterprising man, and we wish him success. By his energy, in connection with his partners, he has succeeded in building up quite an establishment within a very few years, running about thirty-five hands, and turning out about one new job every day, besides doing a heavy amount of repairing. They work something on the plan of a Philadelphia firm, get a good pattern for a job, then run it strong, as we saw they were taking one hundred of one style through, thereby reducing the cost in construction very much.

We were pleased with their manner of doing things, especially in regard to the Journal, Mr. Peters himself volunteering to canvass the shop, when he returned, in about a half hour, with eighteen names, for which amount he drew up a check.

It is the purpose of Mr. Peters to notify the craft, through the Journal, as soon as he is prepared to furnish the dashes, which will be in a very short time.

VOLUME IV.

We are prepared to furnish copies of the Volume (IV) just closed, to all who may desire it. As a work for reference it is invaluable, containing the "French or Square Rule" complete, explained in a simple and comprehensive manner, accompanied with eight diagrams or illustrations. The different branch departments were managed with marked ability, and many useful and important points can be gained by the practical hand, while to the apprentice or one not fully informed, it will, with close application and study, be the means of advancing them to the front rank as mechanics.

The price of Volume IV is the same as the present Volume, (V,) with the addition of twenty cents for postage, which will be required to be prepaid. If sent with a club for the present volume it will come at club rates. Clubs can be made up of either Volumes IV or V, or both together, always adding twenty cents extra for each copy of Vol IV. Price of Volume IV, in numbers, at office, $3; by mail, $3.20; bound, at office, $4; by mail $4.50. We have a limited number of Volumes II and III, bound in one book, price at office, $5; sent by mail, $5.50. We cannot furnish Volume III complete in numbers, our supply of some of the numbers having been exhausted.

OUR NEW OFFICE CHART FOR 1870.

We state, without fear of contradiction, that this is the handsomest Office Chart yet published. It is the size of the former one, is printed on heavy lithograph paper, 24 by 30 inches, and contains 28 fashion plates of the latest standard styles. The oval centre is left blank for the insertion of the manufacturer's card. Surrounding the centre is a very elaborate design, forming a richly ornamented border. It is composed of scroll work, enlivened by fifteen human figures, who are represented offering the good things of the land.

The centre piece and border are in gold bronze. Duplicate orders have come in to an extent quite flattering. One party ordered ninety-two, while others have sent for from two up to two dozen. The builder cannot invest a small amount of money more profitably than by purchasing business and office charts, and distributing them judiciously.

Our Office Chart, nicely framed, will attract attention wherever placed, and be a standing advertisement at a trifling cost.

Price, single chart, $1. To insert the card in the same, $2 extra. Five charts, with card in centre, (in color,) sent, post-paid, $6. Six charts, post-paid, *blank centre*, $5.

Sent on a roller to prevent breaking. All orders promptly filled.

Fashion Plates Explained.

YACHT-FRONT BUGGY.

Plate No. 39.—This original design of a top buggy is presented as one which will doubtless be appreciated by those who are fond of novelty. The yacht-front distinguishes it from all others of a similar kind that have preceded it; and although, in a draft, the full value of an improvement may not be at once appreciated, the *body*, when completed, will show a marked difference. The body, aside from the front, is well proportioned, and free from any quirked mouldings which may look well on paper, but, when applied to the body, give a cheap appearance.

Dimensions.—Width of seat to take 40-inch bows. Seat frame projects over body 1½ inches. Body flared 1½ inches on each side. The seat and body have square corners. Hubs: 6 by 3½. Front band: 2⅜; back band: 2⅞. Spokes: ⅞. Tire: ⅞ by 3-16, steel. Axles: ⅞, steel. Wheels: 3 feet 11 inches, and 4 feet 2 inches.

Painting.—Body, bottom panel and seat-skirt: lake. Carriage-part: brown, with a buff stripe ⅛ inch wide.

Trimming.—Drab cloth, brown welting.

Mounting: gold.

DEMI-LANDAULETTE.

Plate No. 40.—A beautiful pattern of a small Landaulette, having one seat back, and in the front a seat for one or two children. The outlines speak for themselves, needing no extended mention from us. The boot is of the very latest style, having right lines beneath. The bottom line of door straight; the back quarter is made very steep, allowing ample room for seat, giving 4 inches in front of hinge pillar. The circular front is operated the same as that of the Berlin Landaulette, Plate No. 32. The child's seat to be made in the same manner as the one given on page 102, Vol. IV, with the exception that this one should be caned.

Dimensions.—Width of body 51 inches at hinge pillar, with 4½ inches turn-under. Front circle 10 inches from face of the lock pillar. Boot: 28 inches. Mouldings: ½ inch deep, the edges chamfered. Hubs: 4¼ by 7 inches. Front band: 3 inches; back band: 3⅝. Spokes: 1 1-16. Tire: 1 by 3-16, steel. Axles: 1¼, steel. Springs: 1½, 5 plates. The springs should be made short, with a heavy grade of steel, as experience proves that where they are made thus they always give better satisfaction, for they keep their places, and perform the labor required of them with but slight variation. The step shown represents the book-step, which is actuated by a combination of levers placed underneath the body. Persons wishing any further information concerning the book-steps, will write to this office.

Painting.—Body: panels, dark rich brown.

Carriage-part: brown, a shade or two lighter than the body; striped broad lines of drop black, glazed with black japan; fine lines of tan color.

Trimming.—Brown satin.

Mounting: gold.

DICKENS' BUGGY.

Plate No. 41.—A handsome body, light in appearance, graceful, and possessing the valuable quality of admitting of short turning. The cut-under is swept from a circle, giving the proper curve to admit of the wheel passing under the body, and returning again to its forward position without coming in contact with the body. The beveled lines incline at angles, which remove any appearance of clumsiness, and, besides, produce a rakish outline. Clean, plain panels, free from filagree mouldings, stamp the body one of practical worth.

Dimensions.—The same as given for Yacht-Front Buggy.

Painting.—Body: panels, deep sea green. Seat-skirt: lake, edge of same traced with a fine line of French zinc white. Carriage-part: lake, striped with eighth lines of black, fronts of spokes and hubs with an eighth line of white.

Trimming.—Dark green cloth.

Mounting: gold.

FOUR-SEAT STANDING-TOP WAGON.

Plate No. 42.—Having given in previous numbers wagons of a heavier class, we here present a light four-seat. The doors add much to the comfort of the vehicle, as the sides are made deep. The middle pillar is iron, attached to the inside of seat in usual manner. The upper line of side panels have the fashionable curve. The straight and curved mouldings produce a form of belt decidedly novel.

Painting.—Body: seat-skirt and belt, dark carmine, the remainder black. Belt mouldings and seat-skirts traced with fine lines of pale pea green, (white and verdigris.) Carriage-part: black, striped with eighth lines of dark carmine. Hubs and fronts of spokes: fine lines of pale pea green.

Trimming.—Brown cloth and brown leather.

An auctioneer exclaimed, "Why, really, ladies and gentlemen, I am giving these things away." "Are you," said an old lady present, "well, I'll thank you for that silver pitcher you have in your hand."

Agreeably Disappointed.—A carriage-painter, a veteran of the Army of the Potomac, was, during one of the heavy battles before Richmond, dashed to the earth by a round shot, which carried away his haversack, containing eight days' rations of hard-tack for his mess. In his bewilderment, as he saw the crackers flying about in every direction, he imagined they were pieces of himself. On recovering his self-possession, he was pleased to find that he had received but slight injury.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents.*

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "Stray Steps," &c.

CHAPTER XIV.

Sound the loud timbrel o'er Egypt's dark sea.
Jehovah has triumphed, his people are free;
Praise to the conqueror, praise to the Lord,
His word was our arrow, his breath was our sword.
Who shall return to tell Egypt the story,
  Of those she sent forth in the hour of her pride?
Sing. for the pride of the tyrant is broken,
  His chariots and horsemen are sunk in the tide.

As this town of Aden is just at the entrance to the Red Sea, and almost in the Straits of Babel-Mandel, it would hardly be doing justice to the intelligent reader to pass by this famous region, and its historical sea, without giving some information about it, and although in my "Cruise," the ship did not face the dangerous, treacherous waters of the "Pharoah's Sea," yet, on a former occasion, I had the gratification of making the trip from Bombay, via Aden, to Suez, along through the whole length of its 1,300 miles of rock shoal, storm and currents, and made, too, in the hot burning month of June, and it *is hot* at that time. I have been around the world three times, and I am satisfied that the Red Sea is the hottest place on the face of the earth, that is, in the vicinity of the straits. There is no body of water in the world which is more dangerous to navigate than this. In the northern portion the wind blows all the year round from the north; at the southern end it blows from the south, and in the middle, near the tropical line, it don't blow at all; the consequence is, that very powerful currents are created, some of them strong enough to sweep a large steamer from her course. If they were regular there would be no danger from them, but they are not; to-day they run here, to-morrow elsewhere; at one time or place scarcely perceptible, and then again rushing on with the velocity of five miles an hour; the result is, that wrecks are fearfully prevalent, and the passage is dreaded very much. Many and many a thousand of the poor pilgrims, the followers of Mohammed, on their way to kiss the Kabah at Mecca, and thus make *sure* of Paradise, have had their hopes destroyed by finding a grave beneath the troubled waters of the "Gate of Tears." There were but three light-houses in the Red Sea when I made the trip, two of these were on sunken reefs in the steamers' track, and one of them was forty miles from the main land. At low tide the reef shows just above the water, and the men can walk a few yards on the rocks and sand.

The Egyptian government keeps three men stationed here, and after three months' service they are allowed one month's absence, their places being supplied by others. It is a frightful place, and they well earn their holiday. Imagine yourself penned up in an iron cage, set on stilts, in the middle of the sea, the spray flying over the trembling structure, and the thermometer at 87 degrees in winter, and 140 in June; what an oven to bake a poor creature in.

Suez is a great depot now, so all the travel and freight for the East Indies is transhipped here; it is, indeed, a busy place, and the completion of M. de Lesseps' famous canal has made it yet busier than when I was there. The canal finds its outlet to the Red Sea at this point. A little about the canal may be in place here. Although the idea of a canal here is not a new one—it is, in fact, as old as the Pharoahs—still, M. de Lesseps has well deserved the honor and glory which his success has brought him. His attention was called to the subject by reading the report of M. Le Pere, who was employed by the first Napoleon to make a survey in 1798.

Lesseps' father was attached to the French consulate at Cairo, and through his influence the son obtained access to Said Pasha, before whom he unfolded his plan in 1854. At last the enterprise took shape in the formation of La Compagnie Universelle du Canal Maritime du Suez. The charter is to continue 99 years, the Egyptian government furnishing 20,000 fellahs (laborers) to work on the canal, and conceded a large tract of land on the Delta, the same territory which was given by Pharoah to Joseph for his father and brethren thirty-five hundred and seventy years ago.

The Isthmus of Suez is a narrow neck of land connecting Asia with Africa. Geologists inform us that formerly the Red Sea united with the Mediterranean—an examination of the belt of land shows that it has widened since the commencement of authentic history. There has been a literal fulfillment of Isaiah's prophecy in regard to the drying up of the tongue of the Red Sea. Isaiah xi: 15.

In regard to the idea of a canal, when Pharoah Necho was on the throne, 617 B. C., a canal was commenced to connect the two seas, as Herodotus informs us. It was open in the time of Alexander the Great; it was open when Cleopatra was making Mark Anthony a slave to her beauty. The Egyptian galleys, which escaped from the defeat at Actium, were taken through it to the Red Sea. That canal, according to Pliny, was 100 feet wide. After the downfall of the Roman Empire in the East it was neglected, and it filled up with sand, though the line *is easily* traced.

Lesseps' canal is just 100 miles in length. Its dimensions are: width at top, 328 feet; width at bottom, 246 feet; depth, 26 feet. The entrance (the piers) at Port Said, are made of hydraulic lime, brought from France, and sand shoveled up on the shore, the proportions being one of lime and three of sand. This composition was wetted with salt water, and mixed and moulded by machinery into blocks, which were allowed to dry three months before being used. The piers are 5,000 feet in length, stretching out into the Mediterranean, the eastern one converging toward the western, and forming a harbor or basin. The full width of the canal, when entirely completed, will be 300 feet—three hundred feet excavated by the machinery invented by the modern genius, and directed by the guiding mind and indomitable will of a Frenchman, who, in doing so, taught modern Egyptians a lesson in human progress which clashes very strangely with our remembrances of ancient Egyptian history, as given to us in Exodus, which tells us that here, in this very locality, the hosts of Pharoah were overwhelmed by the tidal wave raised up against them by the will of the Lord to punish them for their frightful treatment of the Hebrews. "And the Lord caused the sea to go back by a strong east wind all that night, and made the sea dry land, and the waters were divided, and the children of Israel went into the midst of the sea upon dry ground." And here, a few months ago, 20,000 of these descendants of that same Pharoah's people were, perhaps, scattering the mouldered bones of their past ancestors to the winds of the desert while digging a canal which will allow the people of the whole world to pass and repass unquestioned and untrammeled. "Verily, peace hath her victories as well as war," and the spirit of modern progress is working wonders even among the cob-webbed nations of the East.

Back again from our dreamy wanderings up the Red Sea to our starting-point, Aden. The sun was roasting hot, so that I often used to clasp my hands on top of my head to feel whether or no my hair was on fire, and Charlie wanted to know if this was where the Garden of Eden used to be, "Cos ye know if it was, Fred, my opinion of it is, that Adam had good sense, fur I'd do almost anything to get out of this yere 'Eden.' If they calls this a garden, I'd like to know what they call a heap of cinders and sand. For my part, I'd steal a barrel of apples to get away from here, and I'd give you half."

We got away at last, bound for Bombay and the caves of Elephanta, and hurrah for beauty, toddy and civilization, and not forgetting the pretty girls of the capital of India, commercially speaking.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

GILDING.

BY J. H. T.

(*Continued from page* 134.)

Gilding on Glass.—To gild on the face of glass, take chalk and red lead, of each a like quantity, grind them together, and temper with linseed oil. Lay it on, and, when it is almost dry, lay leaf gold on; let it dry, and then polish.

To Gild on the Back Side of Glass.—Pure water is the best. Have a tumbler of clear water setting beside you, with which keep your mouth cleansed, and with the tongue moisten the glass, and lay the gold on until it is covered. You should then cover your ornament or letters with asphaltum gum dissolved in turpentine, after which wash off all the loose gold. Some prefer to use size, as the white of an egg, &c., but clear water is just as good.

To Gild on Stone.—Take bole ammoniac and oil of ben, of each a sufficient quantity; beat and grind them together, which apply to the stone, and, when it is almost dry, lay on leaf gold. Let it get thoroughly dry, and then polish.

To Gild Iron.—Take one pound of varnish, linseed oil and turpentine of each one ounce; mix them well together, strike them over any metal, and afterward lay on leaf gold or silver, and when it is dry polish it.

Another way of gilding iron is, to take saltpetre, rock alum burnt, of each an ounce; sal ammoniac, two ounces, all reduced to a fine powder. Boil them in strong vinegar in a copper vessel, with this cover the iron, and then lay on leaf gold. When it is dry polish it.

You can gild iron or any other metal in the following manner: first cleanse it very well with a wire brush; but if it is new iron or steel, make it very smooth, and hatch it all over very neatly with a hatching knife, which is a knife with a short blade and a long handle. Then give it a heat on a charcoal fire, so as to make it look blue. Take it from the fire, and lay on gold or silver, and burnish it down a little with a blood-stone or burnisher, and then give it the same heat again, and burnish it all over.

This work of gilding may be repeated five or ten times, still observing to give it the same heat before you lay on the gold or silver, and then burnish it as before directed.

There are other methods of gilding iron, but they are more expensive, and require considerable experience.

To Silver any Metal.—Dissolve fine silver in strong aquafortis, and put in as much tartar as will make it into a paste, with which rub any metal, and it will look like silver, but it will soon wear off.

To Gild Silk or Linen.—Lay some parchment on the silk or linen gently, that it may not sink; then mix and grind some ceruse and verdigris together, of each a like quantity; mix them with varnish in a glazed vessel, let it simmer over a small fire, and keep it for use.

To Gild Paper.—Grind bole ammoniac with rain water, and give one layer of it when it is dry; take glare of eggs, and add to it a little sugar candy and gum water, which lay over the former, and upon this, when it is dry enough, lay gold or silver leaf.

Writing in Gold.—Grind leaves of gold in a few drops of honey, and add to it a little gum water, and it will be excellent to write with.

Another Way to Write with Gold and Silver.—Grind gum ammoniac with a little juice of garlic, and so make it to the thickness of ink with a few drops of weak gum water, that you may conveniently write with it; then let it dry a little, but not too much, lest it should not take the gold or silver leaf; not too little, lest it drown them; then lay your gold leaf on, pressing it down hard, and where the gum water is it will take; then brush off the loose gold, and when it is thoroughly dry, burnish it with a piece of polished ivory, and it will appear very bright.

I might go on and tell how clock-makers silver over their dial plates, which are brass or copper, how to burn gold into steel plates, and to gild metals with different preparations, as gold water, &c., but as I am writing for coach-makers principally, I will forbear by bringing this article to a close.

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 11.

BY J. H. T.

To Dye Bones or Horn Green.—Put filings of copper and verdigris, of each three ounces, into a quart of white wine vinegar; add a handful of bruised rue, mix them well, and put the bones in this for fifteen days.

To Dye Bones, &c., Red.—First, let them be boiled in alum water, then put them into a tincture of brasil, in alum water, for two or three weeks, or else into a tincture of brasil and milk.

To Dye Bones, &c., Blue.—First boil them in alum water, then put them into a dissolution of indigo in urine.

To Dye Bones another Green, like Emeralds.—Put as much filings of copper into aquafortis as it will dissolve, then put in bones, horn or wood, and let them lie for one night.

To Soften Horns.—Take urine a month old; quick lime, two pounds; calcined tartar, one pound; crude tartar and salt, of each half a pound. Mix and boil them all together, then strain out the liquor two or three times, put in the horns, let them lie and soak for eight days, and they will become soft.

Another way.—Take ashes, of which glass is made, and quick lime, of each two pounds; boil them in a sufficient quantity of water till one-third part is consumed; then putting a feather into it, if it peels, it is boiled enough; if not, boil it longer, and when it is enough, clarify it and pour it off, and put filings of horn in it for two days; anoint your hands with oil, and work them as if they were paste, and into what form you please.

To Cast Horn in a Mould like Lead.—Make a lixivium of calcined tartar and quick lime; into this put your filings or scrapings of horn; boil them well together till they come to a pap; tinge this of what color you wish or fancy, and you may afterward cast it in a mould, and make of it anything of what form you please.

To Make Artificial Coral of Horn.—Take the horns of a goat, scrape or shave them, reduce them to powder, steep them in a strong lye of the ashes of an ash fifteen days together; then take it out of the lye, and mix it with cinnabar, dissolved in water; hang it over an easy fire till it grows thick, and then, if it have the right color of coral, make it into what form or fashion you please. When it is hard, polish it. You can also make wooden ornaments, so that they will look like coral, in the following manner: Take cinnabar, well beaten, and apply a layer thereof on a piece of wood, well dried and polished, being first moistened with size made of gum Arabic or glue; then polish it again; and for varnish, rub it over with the white of an egg.

Ivory can be made soft and tough, so that it will not break easily, by boiling a handful of sage leaves in thrice distilled vinegar, putting in a little quick lime, then boil the ivory in this.

SCALE DRAFTING.

Continued from page 134.

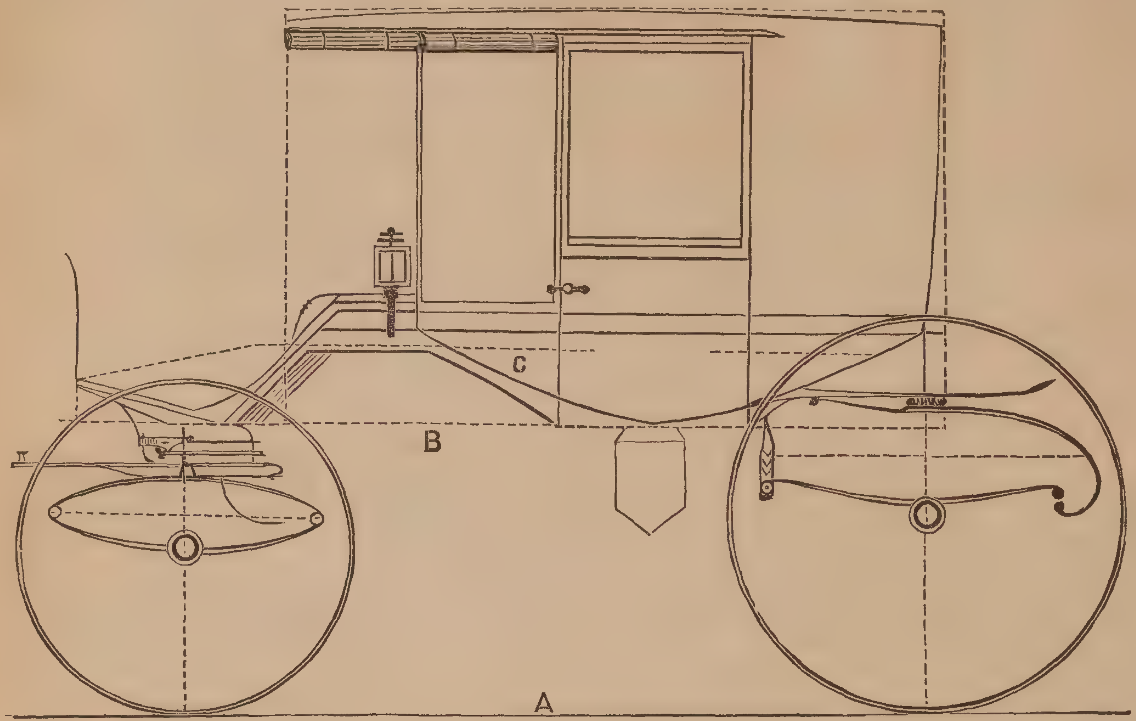
As promised in the outset of the Scale Drafting, we, in this number, give the first of the three concluding articles which will disclose to the student the method we employ in the drafting, ground coloring and finishing a colored draft. We will aim to make ourselves understood in this the concluding and most interesting part of our instructions, and trust that they who have followed us thus far, will, at the close of the volume, feel that they have been amply repaid.

This being the first standing-top introduced in this connection, we herewith present a six-seat rockaway, with sharp lines, similar to those introduced first on the Elm City Landau, which appeared in No. 4, this volume.

The lower lines on side are drawn somewhat fuller than those on the Landau first mentioned, which we consider an improvement. We have also omitted the coupe pillar, for the simple reason that these lines do not harmonize with that construction.

The body to appear graceful, and reduce the rocker to an attractive size, the lines should be carried out front and back on full quarters. In shop parlance, we would say, that the sharp lines, in connection with the coupe pillar, give *too much belly*, and therefore *does not* produce the most pleasing exterior.

In laying out for this draft, first draw base line *A;* then take in your dividers 36 inches, and from the base line produce dotted line *B.* Next, draw dotted line *C*, which is the height of seats, being 11 inches from dotted line *B.* This brings the seats on a line, the front seat forming the top panel of the arch. We secure, by this mode of construction, a lighter appearance on side elevation, for when the front seat is raised above the back one, the head room required above the front seat gives more than is needed on the inside, producing a deep side elevation. And, further, the seat line *C* stands 47 inches from base line *A*, allowing for a 42-inch front wheel; the hind wheel being 50 inches. The hind spring is clipped on top of axle, is 12 inches open; the depth of spring and back bar added to this will establish the line of bottom of pump handle. The front spring should be clipped underneath the axle; the spring to be made 34 inches long, with 9-inch open. We make the front spring shorter to gain more stiffness, for it is necessary to calculate closely for the front platform carriage in the limited space allowed where the front seat is low, as in this draft.



To establish the height of side elevation, measure 3 feet 8½ inches from dotted line *C*, front seat, deducting the swell of the roof from this, and draw the top dotted line. Make the width of door 23 inches; back quarter, at roof rail, 25 inches; front quarter, 17 inches.

Both of the front seats should be made wide, as the trimmings are attached to a vertical back, which requires more seat room in order to add to the comfort of the occupants.

Having established the different points on the body, we next draw the horizontal and perpendicular lines. For this purpose, we make use of the movable half of the T head square, set so as to elevate the body one inch higher in front, the same bevel giving the proper direction of the perpendicular lines. The reason for this is, that the draft, when completed, will appear to hang level, whereas, were the lines drawn perfectly horizontal and vertical, the body would appear to drop in front, a fault too frequently to be observed on drafts by professionals, who might improve in this particular. The swept lines are produced from patterns formed to suit the curves; the end of each line to be marked on the pattern as a guide in reproducing the pencil lines, which in coloring are nearly obliterated.

We will also direct attention to the fact that no ink is to be used in preparing for a colored draft, the horizontal and perpendicular lines are carried beyond the outlines of the body, thus giving their true direction when the coloring has so far proceeded as to require that they should be added to complete the draft.

PALMYRA, WIS., June, 1870.

MR. EDITOR:—The May number of the JOURNAL is received and read with great interest, and can say your explanations of "Oneida Rockaway" and "Bradley Buggy" were satisfactory, except a few points, which probably seem plain to old hands at such work, but I would like to have you explain a little more if not too much trouble. I would like to know just how to make the skeleton doors, as it is a new idea, opening a portion of the curtain for ingress when knobbed down. As I understand the side elevation, there is but one door pillar; how made and how hung is the query? Also, I would ask if, from an end view of the body, the *pillars* are all *straight;* that is, without any turn-under, and also the roof-rail—is it without side sweep, or straight; and should the pillars come out flush with the outside of panels, and how wide will the body be on the bottom outside? How heavy should the pillars and the bottom sides be to be right for this body? Is not the body too wide for our track, 4 feet 8 inches? As I understand the explanations, the body is the same width on the frame at the bottom as at the top, with straight roof-rail and turn-under all in the panels; but the side panels at top edge are 2 inches thick, which makes a heavy projection at the pillar if the frame is straight; and to put them out flush with outside, gives the pillars turn-under.

This is what bothers me—I mean from end view. Please tell me how to put the upper side panel of the Bradley body in a rabbet from the inside, and does the side panel extend the whole length, and cover the bracket front, and what kind of a joint is best for the back corner of bottom side and end bar to finish, as they show as I understand? How much will an Oneida body cost in Philadelphia, doors and front seat hung and ironed?

D. R.

ANSWER.—It is no trouble to answer queries, in fact, we hold a position before our patrons which compels us to enlighten those who may be groping in darkness on different parts of our trade. We confess, however, that we are some-times surprised at the simplicity manifested, but on the second thought feel a pride in being able to clear away all the obstructions lying in the pathway of one who is anxious to improve.

The "skeleton door" is, by no means, a difficult piece of mechanism. In the first place, notice that there is a centre stationary pillar, which is framed to the body. The top edge of the side of body is lightened to half inch. The skeleton door is composed of three parts, viz:

1st. The lock pillar, which extends from the top of side of body to the roof-rail.

2d. A wooden rail at top of the door, which is framed to the top of lock pillar.

3d. An iron support at the bottom, which is let in and screwed to the bottom of lock pillar, and extends forward to a point on a line with the pivot at top of door. At the point mentioned, there is a knuckle or joint, which, of course, operates in harmony with pivot above. The lock pillar certainly needs no further mention.

The wooden rail at top of door should be 1½ inches wide, and 1 inch thick, and in length extending 19 inches front of *stationary* pillar, giving the width of door-way. At the front it is pivoted to the roof-rail, sufficient space being left for the play of door when trimmed. The iron at bottom of door is made flat in order to receive the curtain knobs, which are riveted to it. It extends forward 19 inches, running on top edge of body, which agrees with the length at the top of door, and brings the knuckles on a line with the pivot above. Here a half inch stump joint is welded, which forms the hinging pivot for bottom of door. The stump joint is welded in front to a half inch half round iron, screwed to the top edge of body, and extending to the front pillar, where it ascends, forming a corner. Use box locks for the doors, the handles to be set so that when the door is closed they will stand perpendicular, as shown in Plate 29. Plates should be screwed to the inside of stationary pillars, to prevent the doors from being forced inward beyond their proper position when closed. The best stops are of the dove-tail pattern, as they prevent the doors from working up and down.

To attach the curtain so that a portion of it may be opened, while the whole is knobbed down proceed in the usual manner, fastening the front part to the roof-rail by means of sticks, and at the top of skeleton door tack the curtain to the piece of wood before mentioned as joined to the pillar. The rest of the curtain is knobbed to the door pillar, and the iron at bottom. The curtain, when on and knobbed down, is securely fastened; and as there is a door 19 inches wide. formed of the pieces mentioned, it must be obvious that the curtain opens when the door is opened, for the curtain is attached *to* the door. Forward of the door the curtain is, of course, fastened, so that entrance is obtained only by unknobbing it.

ANSWER TO QUESTION SECOND.—The sides of body are taken from two inch poplar, and swept off to half inch at lower edge, and lightened out inside to one-half inch on top edge. This produces a turn-under of 1½ inches. The roof-rail to sweep so as to bring all the pillars perpendicular. The front and stationary pillars are flush with the outside. The back corner pillar comes flush at the corner, falling back the thickness the round produces.

ANSWER THIRD.—The body to be 43 inches outside for 4 feet 8 inches track.

ANSWER FOURTH.—The front pillar being gotten out by a pattern, it should be 1½ by 2 inches where framed to bottom side, tapering up to 1⅛ inches square; at top, where roof is framed, 1¼ inches. The stationary pillar, 1 inch by 1⅛; back corner pillar same as front pillar; bottom sides, 1½ square; rockers, 1⅛ thick.

ANSWER FIFTH, &C.—*The Bradley Body.*—The bottom side take from 2 inch ash, beveled under on outside, boxed down on the inside to 1½ inches, the top edge being left ¾ of an inch. From the inside of this edge take ⅜ inch, which is the thickness of upper side panel. Sink the rabbet ¼ inch, which receives the panel, and thus hides the joint. The side panel extends to the bracket, falling back ⅜ inch from the lower side, and is leveled up on the front by the duster. The white line extending up the bracket is a 3-16 half diamond moulding, which is finished in a diamond point, as shown in that plate. The end bar should be morticed to the bottom side, falling back sufficiently to receive the end panel, and mitred to upper side panel.

The body will cost from $70 to $75.

I MUST confess that I am unable to define the exact position that my friend H. D. F. has taken with reference to the all-important question of hooping and making wheels. Judging from his communications, one would infer that he was a wheeler. He seems, to the inexperienced reader, as master of that particular branch of the business; but when a practical and scientific wheeler reads his theory, he can readily detect that it will require practice before he can make as good a wheel as the wheeler, notwithstanding, in his position, he has had the oversight of putting up the wheels. I am free to admit that it has cost my friend many questions to have attained so much knowledge as he would appear to be the possessor of. In reading over his communications, I am forcibly reminded of my own position. The trying times I have passed through—*I must correct*, I have not got through—but I will tell you I have got just far enough to know that I never can be competent. I have for the last eighteen years asked many questions as to what does so-and-so mean in the German. I was always put right on my question. I could always understand what was said to me—what was meant was something else—nevertheless, I used to think that I knew about as much as those that knew no more than I did, and the result was, I stuck to it. Now, I am free to admit that H. D. F. is legitimately entitled to hold the position of master of his chosen vocation, not doubting for one moment but what he is master of the heading of his communications, viz: Hooping Wheels, when they come into his possession, and out of the hand of a competent wheeler, that he stands on the top round of the ladder, with the advantages of holding in his possession the next round to be inserted, his judgment as to the different qualities and temperaments of steel and iron, and how to work them. Upon these points doubts are not admissible to my mind, for the reason, simply, I am not practically informed to the contrary. While doubts do not trouble me as to the truth of these remarks, the competent smith might differ, from whom a doubt could possibly be admissible, while from me it would be preposterous; to dictate would be an insult to his superior advantages and many years' experience.

I hold that it is next to an impossibility for the smith to dictate to the wheeler as to the construction of the wheel; he has not the advantages of discriminating as to the quality and temperament of timbers, which is a very essential matter in the proper construction of the wheel.

Hub timber has been referred to by H. D. F. He says that red elm is preferable to birch, and gives as a reason—first, it will hold the spoke better, which is correct; second, he says it is not so liable to be affected by the weather. This I consider a mistaken idea, for this reason, elm is, as he says, more porous; or, in other words, coarser grain. Now I think the coarse grain, or porous, is more liable to suffer from exposure than the fine grain of birch and gum.

As I am behind time, I shall have to drop this question for the present.

For the Coach-Makers' International Journal.

WOOSTER, OHIO, June, 1870.

MR. EDITOR: I have been much interested of late in the controversy between Spoke Shave and H. D. F., in V. Ulcan's department, on Wheels and Hooping. Now I wish to ask either of them, or any of your readers, what would be the effect on a wheel should the rim be made a quarter of an inch longer than will allow in order for it to rest firmly on each shoulder, and then the smith, in setting the tire, to give it *three-eighths* draw? In other words, take a wheel that is badly rimbound, and instead of cutting out a piece of the rim, give the tire sufficient draw to bring the felloe down tight on the shoulders.

This question may seem to some as not worthy of investigation, or an answer in the JOURNAL; but I will say this, any one answering, (and we wish all thinking men to do so,) had better be sure he is right, for I expect you will hear again from me, and somebody may find out they did not know everything. PROGRESS.

HOOPING WHEELS.

(*Continued from page* 135.)

I will now resume my remarks on wheels. In the communication I gave you in No. 5, the rule in regard to the draft of the tire, and the opening of the wheel or felloes, has been practiced by all prominent workmen for years. But as this is an age of progress, I will give you a new rule, which I suggested to my employers some four years ago. They allowed me to try the experiment, which I did with success, and have tired all their wheels since that time under it, which has so far given good satisfaction, and I herewith give your readers the benefit of it.

All wheels of the following dimensions, from ¼ to ¾-inch original dish, with every joint in the wheel made tight, give the following drafts in tires: For instance, a wheel for Boston coach, made with spokes 1¾ inches, 1½-inch felloes, ¼ dish, give ¼ draft. If ½-inch dish or more, give 3-16 draft.

A wheel for Clarence, if 1½-inch spoke, 1⅜ felloes, ½-inch dish, give 3-16 draft. For ½-inch or more, give ⅛ draft.

A wheel for Landau, 1¼ spoke, 1¼ felloes, ¼ original dish, give plump ⅛ draft. If ½-inch or more, scant ⅛ draft.

With these three examples any practical smith can vary the draft according to the weight of the wheels.

When wheels are made from ¼ to ⅝ original dish, I find it is unnecessary to cause so much strain on the spokes as the former way. The wheel looks better and will last longer; also, will be in better condition when it becomes necessary to reset the tire. Wheels that we use have to be made more dishing sometimes than necessary, to give room to meet the demands of the body, in consequence of being confined to a certain width of track, to suit customers in different sections of country; at the same time it does not injure the durability of the wheels. No kind of wheels, save those for light buggies, should be made any less than ¼-inch dish.

In setting steel tire, it is a very good plan to heat them with shavings, and use care and not heat them so hot as to scorch or burn the felloes, or so hot as to require any water to keep them from burning; set them away and let them cool themselves. This will prevent charring the felloe or hardening the tire; also, will serve to season the felloe. But in order to do it this way, the tire must be made true; this will require more time and skill. Tire can be put on as heavy as ½-inch, and with due care this can be successfully done by heating them on the forge, and is the best way a buggy tire was ever put on.

Any workman, after putting on a few sets from the forge, can put them on about as quick as out of doors, after they are all fitted and ready. Just here I will mention one little thing that may benefit some persons. It is this, use a sharp pencil to mark with when running the wheel, and also the tire, and throw away the chalk. There is no man, however long his experience, can be successful in using chalk to mark with. They will often vary the amount of draft they desire to give, and after, when the tire is on, they find one wheel not dished enough, another too much, and another just right, and so on, and still cannot account for it. It must be that S. W. R. used chalk to mark with, and this was the reason why he could not get a uniform dish on a set or two of wheels one time out of ten.

A very light buggy or sulky wheel should be rim bound 1-32d part of an inch, and the tire run to the mark when hot, after welding, or, if you wish to be very nice, give ⅛ when cold, which will bring the felloes all snug on the shoulders of the spokes.

A straight wheel cannot be dished; but for a wheel that is straight across the face, and made perfectly tight, give the same draft as in the straight wheel.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

(Continued from page 136.)

GROUND & STRIPING COLORS & VARNISHING.

The ground colors for the carriage-part vary according to the freaks of fashion, therefore do not always follow the color of the panels on the body. During the "late unpleasantness," when money circulated freely, and the gay trappings of the military created a taste for flashy colors, we had quite a run of "staring" patterns to follow. The cavalry suggested yellow, orange and gold; the artillery, red; the Zouaves, in their uniform, copied from the barbarians, gave us crimson, and it may be that we insensibly preferred blood colors, imitated with carmine, because our daily papers teemed with the recital of gory battle fields. Whatever occasioned our wild and crude taste, no one will deny that it then existed. We are now returning to colors more subdued in tone, and less striping is being put on.

The method generally adopted is to paint the carriage-part one or two tones lighter than the color of the panels of the body, except where the panel color is of a hue that will not admit of it. Certain shades of green, blue and red may be used on panels, but would not, when made a tint or two lighter, be suitable for a carriage-part. Dark browns, claret and purple-lake would not be open to this objection, because, to the majority of persons, they are colors which are pleasing to the eye in both their deep and medium tones.

When the panels are to be painted green, blue or red, and the painter wishes to carry these colors on to the carriage-part, it is the better plan to use them for striping only, and this but sparingly—the ground color to be black.

A carriage-part painted black may be made to harmonize with any color used on the body, as the striping colors can be selected so as to produce any desired effect. Brilliant striping can be brought out on dark colors only, while if the ground color be light, recourse must be had to dark colors in striping in order to form a contrast. On heavy work, we prefer dark colors; on very light work, light colors, rich in tone, are appropriate. The carriage-part should not detract from the appearance of the body; that is, there should be sufficient contrast between the two to bring out the beauties of the body. A plainly finished body will appear to better advantage on a showy gearing, and a richly painted body on one that is not overwrought. Ground colors, of any hue that may be given, will accord passably well with a black stripe; but with the exception of white, straw color and similar delicate tints, drop-black of the best quality should be used, for lampblack will appear gray or of a greenish cast. Lampblack is cleared up, and appears dark enough on the light colored grounds above mentioned.

From black the painter may ascend through colored grounds by various mixtures. Browns are formed by the admixture of reds with black, and are dark or light according to the tone of the red, and the proportions mixed. Drop or lampblack, and Indian red, and vermilion, are used for ordinary purposes. Other shades of brown are formed from black and burnt sienna, Vandyke brown and burnt sienna, burnt umber and black, &c., and a richer tone of each is secured by the addition of a small quantity of lake. Lighter shades of brown require yellow to heighten them. These cannot be mixed where black is an ingredient, as yellow and black produce green.

Burnt umber, Vandyke brown, and others of this class must be used, and when mixed with reds and yellows, give a range of brown tints well adapted to carriage-parts. Burnt umber and orange chrome produce a handsome ground work, and when striped with drop-black and gold is very attractive. A very pretty style of striping for a dark brown of the above mixture would be to mix the broad line a shade or two lighter than the ground color, fine lining it with black and gold, or black and red, orange or tan color. Black striping may be omitted, but, in our opinion, to the injury of the ground colors.

Lakes, of the different hues manufactured, form a richer type of colors, and may be used pure, or mixed together when lighter tones are required. English purple lake, by adding to it carmine, Munich lake, and others which are brilliant, preserves the richness so desirable. Vermilion, and inferior reds, destroy their beauty.

Drop-black, used for striping on these colors, is ever pleasing. Rich brown shades, either dark or light, relieved by fine lines that harmonize, are also very handsome.

Greens of a dark shade are used more or less, but this color is not so much admired by the majority of persons as to warrant its use to any extent on carriage-parts. It is fashionable this season, yet it holds but a limited sway. A bright green is offensive to the large majority of persons; a dark, rich green, admired by but a few. Milori green, glazed with verdigris, or Emerald green, and striped black, should be the limit adopted, as the *cheap* mixtures are unsaleable.

Blue is an unpleasant color for gearings, and even when used for striping is staring, not rich. For vehicles designed to attract especial attention on the street, it is very serviceable, but for private work it is far from being *the thing.*

Tan, straw, corn, Jonquil yellow, and all very bright tints, give a clean, fresh and light appearance, and are well adapted to light work. They are generally striped with black, browns and lake. Neutral tints may be used with good effect also.

In striping carriage-parts, the painter should use bright colors very sparingly when he is ordered to put on the full amount of striping. A fine line placed on the face of the spokes and hubs, and distributed over the inside carriage, would bear to be far brighter in color than when each side of the spokes and the face, the hub, the felloes, on both sides, &c., are to be striped.

Colors, such as a clear chrome yellow, chrome green and cheap reds, should not be used on good work.

Mellow down chrome, and other bright yellows, with white, or give them an orange cast with red. Greens should be mixed of a pea green tint rather than those of yellowish green. A green tint may be toned down with carmine or lake, and still preserve sufficient of a green cast. For striping white, use French zinc white, cremnitz, flake or china white. The first mentioned will be found to grind easily under the palette knife, and produce softer tints than those whites made from lead. The proper arrangement of colors having been noticed in our articles on the "Principles of Coloring," it will not be necessary to recapitulate them.

VARNISHING.

The coatings of varnish contribute largely to the durability, as well as beauty, of a carriage-part. The ground and striping colors are shown in their purity only after they are varnished and have a good surface; and the after test of wearing depends on the quantity and quality of the varnish applied.

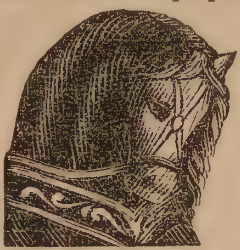
Every carriage-part should have at least two coats of *clear* varnish. The first coat of clear varnish to be applied over the color and varnish; the second, a finishing coat, possessing a good body and wearing qualities. Ground pumice and water must be used to cut down the varnish, otherwise the finishing coat will be robbed of its beauty.

In laying on the finishing coat, apply it neither very heavy or very light. Put on a medium coat—a thin one will appear gritty and rough; one too heavy will sink in and grow dim. Use the best American or English elastic gear varnish for finishing.

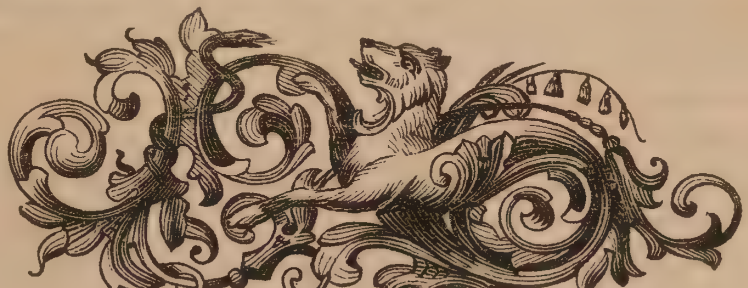
ORNAMENTS.—The horse, noble in bearing, beautiful in form, and of priceless value to man, has, from the earliest and rudest attempts at pictorial representation, formed a pleasing study for painters and sculptors. He has figured in the quiet and peaceful rural landscape, where he does his master's bidding from the time the soil is turned over until the heavily laden carts are deposited at the barn door with the golden harvest. On the road for pleasure, in the din of battle, or wherever man chooses to place him, he is faithful to the trust reposed in him.

Artists inform us that the horse is the most difficult subject to draw and color correctly among animals. This being the case, the student should not become discouraged if, at the first, second or third attempt to paint the pattern here given, or any other one he may select for his study, should look like anything except a horse.

The wood cut here shown is not perfect, but will answer our purpose. The position of the head, producing the arched line of the neck, will be found as difficult a study as the learner will care to attempt. First, secure a distinct outline, then mix up three or four tints of the color you decide to use, and also place on the palette your color for shadows.



Lay on the shadow tints where your outline indicates their true position, paint them thinly, and proceed to lay on the half lights, remembering that all objects viewed under the effects of light show but a small portion of *high light* compared with that which is graduated off into the shadows. Having coated the pattern, without paying any attention to the details, unite the colors with a blender, to remove brush marks and soften the hard lines. When dry, use a fine pointed sable pencil, and sketch in the details very carefully, bring out the nostril and eye boldly, deepen the shadows; where they are darkest, paint the lights clear, giving decided touches, and when good enough, do not disturb or attempt to better them.



Finish one study in this manner, and set it aside, and when you are again in the humor, attempt the second.

Keep a minute of the colors used, and how mixed.

If you decide to represent a white horse, so called, you cannot do it with clear white. There must be a set of delicate grays mixed, so graduated as to give the true contour of the muscles, &c., finally abandoned for the positive shadows, which are of an umber cast.

Having brought out in gray tones every part of the study, the high lights may be touched on boldly, with a tint not far removed from clear white.

A black horse cannot be correctly shown by the use of black and white. Dark brown and lead colored shades, with the shadows deepened by glazing, and the lights of a bluish tint, would have to be employed.

Colors of a deep red, and others of a variety of shades, to be noticed on the glossy coating of the horse, may be imitated successfully by looking closely at the mass of the color in shadow, and preparing the colors accordingly, and not by carrying in the mind the effect produced upon the eye by the highest light and color; for if you begin by mixing the brightest tint, and get your pattern coated with this, you will be at sea in the attempt to produce a natural effect.

SCROLL PATTERN.—The design herewith given contains simple and easy curves. The largest liberty is allowed in ornaments of this character. The human form, beasts, birds, reptiles and fishes are employed to enrich scroll patterns.

The designer does not follow nature exactly, but may add a curve or scroll here and there, giving the upper portion of the human body, and dispensing with the lower limbs by sweeping them off into graceful scrolls; or, as in the accompanying illustration, make use of the foreparts of a beast, and bring the curve of the back into a scroll line, which, with its members, forms a portion of the scroll pattern.

In the attempt to copy this design, note that its length is twice its width, or nearly so. Square the pattern, find the centre, and draw the centre lines; then strike the circles and sweeps of the larger portions, filling in on these governing lines the details of leafing, &c.

It may be laid in gold, introducing colors on the scroll work. But as colors are more difficult to handle, we would advise their use. A light colored ground work is the most favorable, as the colors may be selected of gray, purple-gray, drab, brown, light and dark shades, &c., and the scroll patterns be relieved from the ground color by shadow.

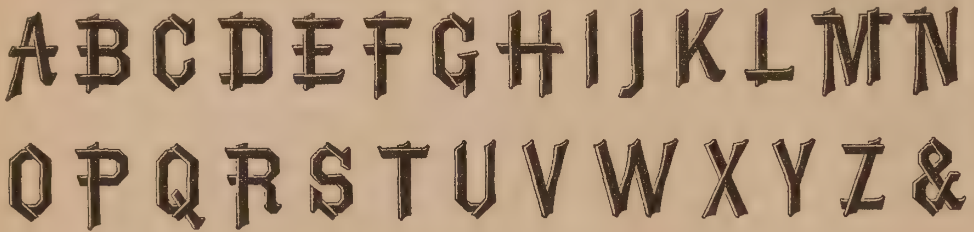
Clear vermilion should not be used as a ground work. White, straw color, poonah yellow and umber-toned drabs are the best.

As in a piece of wood carving, the individual parts would not reflect one glare of light if the whole were painted pure white, much less would drab, gray, brown, green, or any other color, hue or tint, present this appearance. A brown scroll must be painted in graduated shades of brown, and so with drabs, greens, &c.

Having decided on the colors you wish to employ, mix up three or four hues of each, placing the lightest on those parts to be brought forward, the darker toward the receding portions. Mix the colors to dry slowly that they may be properly blended. Form the leafing with broad lights and shades, using sharp lines sparingly, even on the finishing touches.

With these hastily written hints, we trust the student may gather something of value.

Unique Alphabet.—In the December number we gave the alphabet in German text, and we herewith present to the readers of this department a late style of type, which is admired by a large number of persons. The letters are of an ornamental block pattern, being formed as if made of narrow strips of wood, beveled on the ends, and the pieces then placed in a position to form each letter.



Their beauty or oddity, whichever you please to call it, consists in their irregularity, relieved by a light line to the left. The proportions may be ascertained by measurement with the dividers. Square the letters, then take in the dividers the width, and ascertain how many times it is contained in the height. Having secured the proper proportions, you may enlarge them to any required size.

By drawing horizontal lines through the different corners or angles of each letter, the exact position of every part of them will be disclosed, and in enlarging, these lines will greatly assist in securing to every letter its precise form.

Monticello, S. C., June, 1870.

Mr. Editor:—Please be so kind as to inform me how to mix gold bronze to run fine or coarse lines on bodies or carriage-parts. Also, how to mix colors for cane work, to be used in a pen. By answering you will oblige a

South Carolinian.

Answer.—Gold bronze may be mixed in boiled oil, raw oil and japan, raw oil and sugar of lead or varnish. Raw oil and japan, with a small quantity of orange chrome, ground very fine, and mixed with the bronze, will help to give it body, and stripe and cover very nicely.

The bronze should be used from a small pan or box lid, and be kept stirred, as it settles rapidly. Use the mixture as thick as possible, so as to secure the particles of bronze in sufficient quantity to have each stripe well covered. Either the coarse or fine line pencil may be used, the only difference being in the quantity required to complete the work.

Colors for the striping pen may be mixed as those for striping pencils. We mix the color to suit the time we may have, and according to the nature of the pigment of which the striping color should be composed.

The great secret in the use of the pen is to have the colors very fine, the vessel from which it is used clean, and the paint thinned down enough to admit of its flowing freely out of the pen. By experimenting on a separate piece of panel stuff, the required thinness will be obtained.

The color for cane work would not differ from other colors composed of lead and ochre, because it was designed to use it from a pen.

Colors may be ground in sour beer, where work is in a hurry, but it must be varnished as soon as dry, to prevent damage from water in the act of washing the panels. The pen points should be perfectly true.

Alton, Ill., June, 1870.

Mr. Editor:—Nothing to report, only Noble & Hoare's English varnish is working very bad this year. The cause, lack of age. One question I wish to ask P. Alette, and that is, what is the difference in the private mark of Noble & Hoare's varnish; for instance, some labels are marked 22-37, 24-19-7, 1-12-8, 17-3-8, 9-4-9? I find quite a difference in the working of the varnish. I remain, yours, &c., G. W. B.

Answer.—Friend B. says he has nothing to report, only "Noble & Hoare's varnish is working very badly this year." Well, now, to the carriage painter, who has the responsibility of producing perfect work, amid all the vexatious circumstances which surround him, we should decide that he (G. W. B.) has a *great deal* to report.

Probably our fellow-craftsman means to say that he is overwhelmed, and therefore sums up his troubles in the four words, "*is working very bad.*" The finisher, whoever or wherever he be, will readily understand the full import of those words, "working very badly." They call up visions of frowns, if nothing worse, from the employer, dissatisfaction on the part of the customer, muttered or outbursting invective from the painter against the varnish, varnish-maker, the trade to which fortune has assigned him, and so on, winding up with the promise, made to himself, that he "will quit the business before another year rolls over his head." But as trouble has been weighed out, and a portion assigned to every state and condition, the finisher may as well keep cool in a varnish room, even where the thermometer indicates 100°.

Our friend at Alton appears to take the matter coolly, for he adds, "*Cause, lack of age.*" This shows the proper spirit, and the plan to adopt would be to set the varnish to one side until it shall have arrived at the age of *discretion* or maturity. But we will recover from our wandering, and reply to your query.

The extent of our knowledge concerning the private marks on the labels of the Noble & Hoare varnish can, may be summed up in a few words.

The firm are Friends or Quakers, and use the style of expression peculiar to that sect, and, therefore, on a label, instead of marking the date as is our custom, they abbreviate thus: 17-3-8. seventeenth day, third month, 1868. Again, 9-4-9, ninth day, fourth month, 1869. Your figures, 22-37 and 24-19-7, we do not understand. First, if 22 stands for the *day* of the month, 37 must represent either the *month* or the *year*, and as there are but twelve months in a year, 37 cannot show the month, and if it indicates the year in which it was made, it would date back to the second year after Mr. Lawrence, of New York, made the first importation of English varnish into this country, viz: 1835, which is highly improbable. You may have not copied the figures correctly. Again, arguing from our knowledge of their private mark, 24-19-7 would have no meaning; twenty-fourth day, nineteenth month, 1867. The nineteenth month is not on *our* calendar; the twenty-fourth day and 1867 would come within the proper bounds. We have given you an answer based on our limited knowledge in the matter, and we would be pleased to have further light thrown on the subject by any of our readers.

As the marks indicate the age of the varnish, and the proper working of the varnish depends on its ripeness, the difference in the good qualities of separate cans might be accounted for by the difference in the markings.

For the Coach-Makers' International Journal.

HANOVER, N. J., June, 1870.

MR. EDITOR:—As you invite correspondence on making putty, I thought I would give you a little of my experience; if it is worth anything, you may publish it for the benefit of your readers. I have mixed putty in different ways, and have been troubled *not* a little with the difficulties you speak of. Of late years I have made my putty with equal parts of quick-drying varnish and japan, using dry lead. I use the putty hammer freely in forming the mass. I have repainted some work that had run three years, and found the surface smooth as a general statement, and the putty firm in the holes. This kind of putty dries rapidly, and bears sandpapering in a few hours, it also rubs well under the pumice stone. I think it proof against water, as I have had occasion to cut it off from screw heads, and have found that it not only adhered firmly, but that the screws were free from rust. B. T. P.

SHEARS, NEEDLE & TACK HAMMER

T. ACKS EDITOR

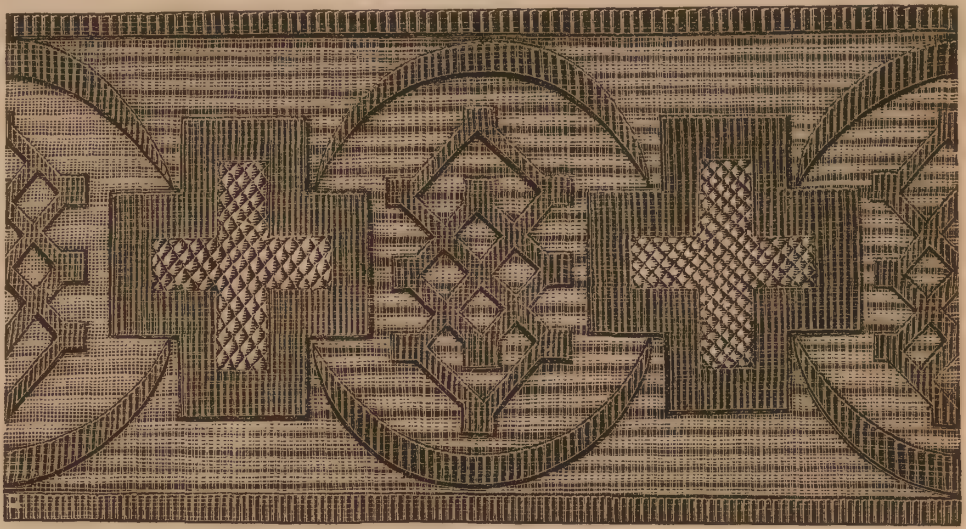
No. 4.

METHOD IN THE TRIMMING SHOP.

APPLIED TO A CLOSE-TOP GIG OR PHÆTON.

If it is to be a shifting-top, proceed as for a roll-up-top, (No. 3.) When the body is trimmed, set up the bows; and when the top is in its place, proceed to put in the head lining. Fit on the cloth smoothly *over* the bows, then mark the lower edge of the rail with chalk, on the cloth, from the edge of the back stay line around to a point two inches in front of the prop-block; also from a point about five inches back from the slat-iron prop to the line of the front bow, and four inches above the slat-iron prop. Then paste thin enameled leather, four inches wide, on the back part of the head lining, the bottom edge of the leather to come down to the chalk mark already made; but in front it will be necessary for the leather to be wide enough to extend to the mark, four inches above the slat-iron prop; also mark the point of the slat-iron prop. If you intend to slip the head lining on the prop, you should stitch a hole in it for that purpose, but I find it best to use the *half-bow cap finish*, as described in a former number of the JOURNAL, as it appears to obviate all danger of the head lining tearing out at that point; and we also use the piece of wood screwed to the side of the rail, and projecting out flush with the edge (or duster) of the seat, for fastening the head linings and leather to. When the lining is in, nail on three strips of straining web along the bend of the bows, or strips of enameled duck will do as well, and two strips from the back bow to the rail, one of them along where the outer edge of the back-stay will be. This strip should have a piece of harness leather stitched to the bottom end of it, so as to slip over the prop-iron, the other strip nailed to the bow three inches to the front of the first one, and to the wood on the rail three inches in front of the prop-iron. Now, fit on the leather, rubbing it up along where it will lay over the bend of the bow. Nail it back and front over the bend first, then draw it downward, and slightly back to the prop-iron of rail. Cut a hole, and slip it on to this; then go to the front bow and draw smooth, and last go to the bottom again and draw slightly downward. Now, punch a small hole through the leather, into the bow, just where the top props are to be, and when you take off the leather to stitch it, paste a thin piece of enameled leather cut round with edges shaved thin, about two inches in diameter, over the holes. This will save the leather from getting worn at the prop. Now, if the back stays are ready, nail them up and fasten them temporarily to the side quarters with eight-ounce tacks, taking care to allow the quarter to be loose or full; in other words, the side quarter should have one-fourth of an inch fullness from a straight line where it is seamed to the back stay.

Now, take off and stitch the quarter to the stay, then put on the props, and give the length of the joints to the blacksmith, and have them ready to put on when you draw on your top. It is a good plan to have the joints on the top when the back curtain is hung to its place, because you will then be able to hang it evenly. Now, put on your muslin and stuffing, and proceed as for a roll-up-top. (See No. 3.)



NEW STYLE OF BROAD LACE.

The accompanying illustration represents a section of broad lace, of a late and handsome pattern, furnished us by Charles H. Pardee, New Haven, Conn., whose name is already familiar to our readers as a manufacturer of coach laces, fringe, tassels, speaking tubes, &c.

The sample sent has a medium light-brown background, the raised figures being of a dark brown, and the centre space of each cross is filled in with a very rich hue of red.

This is but one of several recent styles gotten up by Mr. Pardee, who claims to keep a fine assortment of goods adapted to meet the wants of first-class coach and carriage-makers throughout the country. For originality of design, arrangement of colors, quality of materials and workmanship, the lace from this manufactory deservedly holds an enviable position. Much of the beauty of the inside finish of a carriage depends on the quality and pattern of the lace, and builders show good taste and a sound judgment when they select those patterns which are *rich* and not *staring*, and very poor taste by the selection of cheap and gaudily colored patterns.

In the manufacture of first-class goods of any kind, the stock used, and time and skilled labor employed, enhance the value of the product, and the price charged the consumer must be in competition with the same quality of goods by different manufacturers, and not with cheap grades.

Our *careful* readers in this department should refer to Mr. Pardee's advertisement, and send on for some of these late patterns of lace.

THE STEEL TUBULAR BOW SOCKET.

We have just completed a top, using a set of the above articles, and it may not be out of place here to offer our slight experience of them to our readers.

Our objections may be briefly stated, and first is their liability to get indented, especially the back bow at the place where it will lay on the prop-iron. This objection applies to leather covered bows as well.

To obviate the difficulty, as far as possible, I half filled the back socket with thin glue, and when the bow was driven in, it forced the glue into all parts, thus making an almost solid mass of glue, wood and iron. I am in hopes this will do.

Second objection is in the difficulty of finishing the inside lace, and the trouble about getting on the props on account of the iron being above the line of the props. I got over this part by using Kimball's bolt props, driving them in before finishing the inside lace. Of course holes had to be punched and reamed through the iron of the sockets on both sides of the bows for this purpose; but although this was troublesome, it made a first-rate job, and the very fact of the sockets running up so far was actually an advantage, for the iron holds the bow as in a clamp, and prevents any chance of its splitting when driving in the bolts. To finish the inside lace, I punched small holes through the socket into the bow, and proceeded as in the ordinary leather covered bows. Holes for tacks will also have to be punched on the *front* of the front bow to enable you to finish the bottom of the front valance over the head lining and lace. Holes for the curtain knobs can also be punched on the outside. Those are a few of the difficulties in a first use of the bow sockets, and they are easily got over. On the other hand, I like them very well, as they look much lighter and neater than the old style. Of course, a bow may be dressed down to look as light as these do, but then there would not be any strength left in the bow, as it would, in all probability, soon bend outward. The advantage of the socket is only in the fact that they combine lightness with strength. I do not think there is much, if any, work saved. On the whole, I like them, and will continue to use them, provided they do not get indented too easily, or give out at the bottom end where they are riveted to the cap.

SIDE LIGHTS FOR LEATHER TOPS.

Could not some inventive person manage to get up some better, simpler and neater arrangement for finishing the side lights in leather tops? We think there is a good chance in this for some one to "make stamps."

Selections.

BLACK PIGMENTS.

Lampblack, drop black, ivory black, bone black, Frankfort black are the names applied to the simple substance which affords all the blacks used in painting, and in the manufacture of printers' ink, viz., carbon. Lampblack, the most important and useful form of carbon to be considered here, is produced from the article known in trade as common resin, or other bituminous substances. The finer kinds are made from resin, and the common kinds from coal or gas tar.

All resinous, oily, fatty substances produce lampblack in the process of burning, it being simply the soot resulting from highly combustible bodies as they are imperfectly consumed. Every smoking lamp is a lampblack manufactory in miniature. Being nearly pure carbon, it is one of the most unchangeable substances known, absolutely indestructible under all ordinary influences. Acids, alkalies and gases, which powerfully and rapidly affect most other forms of matter, have generally no effect on this.

The most powerful sunlight cannot bleach, or destroy, or change its form or character. Through all the changes of times and seasons, the winter's cold and summer's heat, it remains the same. Except in combination with oxygen, it is unchanged by heat, and in some of its forms a furnace-fire which will melt steel as wax, causing it to flow like water, does not produce the slightest perceptible effect on this simple substance.

A very good idea of its permanent character, when used as a paint, may be had by observing the old sign-boards at toll-gates and toll-bridges. Exposure for many years to sunshine and storms has, in most cases, not only removed the surrounding white-lead paint which originally covered the wood, and on which the letters were traced, but the wood itself will have yielded to atmospheric influences and fallen away by slow disintegration, leaving the characters which signify the directions, rates of toll, etc., raised above the surrounding surface, like the letters used by blind persons in learning to read.

The carbon used in painting the letters has remained through all, the same bidding defiance to the tooth of time himself. This property is shown also in a more striking degree, perhaps, by the writings found at Herculaneum, which have retained their original blackness for more than two thousand years. In remote former periods this property was known and appreciated, and the ancients seem to have availed themselves of it on all important occasions.

It would be a great mistake, however, to suppose that all the black paint sold and used is pure carbon: on the contrary, all that is used in ship painting, and known as common black paint, is very extensively cheapened by adulteration. So far, indeed, is this process carried, that common black paint is mostly composed of some cheap earthy substance, blackened by the addition of a small percentage of lampblack. The extensive use of this worthless material affords another instance of the want of economy manifested in painting. The actual first cost of painting a vessel with pure carbon black is much less than painting with the cheap adulterated material in common use, to say nothing of the saving in labor, which is a most important consideration. While, in the one case, the paint retains its blackness, and adheres tenaciously to the wood, in the other it turns gray after a brief exposure and needs frequent renewals.

The test of the purity of black paint is its weight in proportion to its bulk; a can or keg which will contain twenty-five pounds of common black paint contains but ten pounds of pure carbon black. One pound of pure carbon black will cover as much surface as three pounds of common black, at proportionately much less expenditure of labor. Notwithstanding these facts, it will be difficult, if not impossible, to obtain in any chandlery in the city of New York, where ship paints are sold, a keg of pure black paint.

In ship painting, as in house painting, good results can be produced only by the use of good material. *The best is always the cheapest.*

The article next in importance is ivory or bone black (animal charcoal,) known also as drop black, and patent black. This is made by first calcining bones or ivory chips and turnings in a close retort, and afterward powdering the charcoal, and grinding it in water between heavy millstones. To render it more entirely black, and give opacity, a portion of prussiate of iron is added. After being thoroughly dried in the form of drops or cakes, it is again powdered, and again ground in oil. This black is used mostly in coach and carriage work.

Frankfort black is produced by calcining vine branches and twigs, and other lees of the vinegar vats in Germany. It is of no particular importance to the house painter, but it is used to some extent in painting in water colors. It has a particular blue tint.—*Masury.*

Remedies and Receipts.

Cabbages should be boiled an hour. They should first be examined lest insects be lurking in the folds.

Gapes in Chickens may be easily cured by giving them small crumbs of dough, impregnated with a little soft soap; once or twice is sufficient.

Common Small Beer.—A handful of hops to a pailful of water, a pint of bran and half a pint of molasses, a cup of yeast, and a spoonful of ginger.

Warts, &c.—The bark of the common willow burnt to ashes, mixed with strong vinegar, and applied to the parts, will remove all warts, corns and other excrescences.

French Salad.—Put a shallot, some parsley and three anchovies; shred fine into a bowl, and mix with a tablespoonful of oil, two of vinegar, a little salt and mustard. Prepare it two hours before serving.

Gooseberry Jam.—Take what quantity you please of red, rough, ripe gooseberries; take half their quantity of lump sugar, break them well, and boil them together for half an hour or more if necessary. Put it into pots, and cover with paper.

Green Peas should be young, and fresh shelled. Wash them clean; put them into soft fresh water, just enough to cover them, and boil them till they take up nearly all the water; then take them up, and all the water with them, and season with salt and butter.

String Beans.—Select those only that are tender. Cut off the ends, and wash them well. Take a handful, and lay them even, and cut them very fine with a sharp knife upon a board or table. Put them in when the water boils, and if very tender they will require but half an hour; if not, longer. Season same as peas.

Pine Apple Preserves.—Take those that are ripe and fresh, pare off the rind, and cut in slices half an inch thick. Sprinkle between them powdered loaf sugar, and let them remain till the next day; then, with the usual syrup, boil until tender, putting them in when it is cold. Keep in a cold place.

Currant Jelly.—Put the currants into a jar, and set them into a kettle of hot water until they become soft, so that they will mash easily. Express the juice, strain it, and allow a pound of sugar for every pint. Boil them together slowly, skimming well, until it becomes ropy.

Scraps of Humor.

A boy's idea of having a tooth drawn may be summed up as follows: "The doctor hitched fast on me, pulled his best, and just before it killed me the tooth came out."

A LADY recently sent a fur cape to a fur establishment for repair, explaining her wishes in the following note: "I want mi kape mendid whar the mices nored it in gud shaip."

"YOU ought to acquire the faculty of being at home in the best society," said a fashionable aunt to an honest nephew. "I manage that easy enough," responded the nephew, "by staying at home with my wife and children."

BREVITY is the soul of wit. "Up to the knee and ninepence" was the reply of the country maiden when asked how high was the creek, and what she got for butter. The reply made her the wife of a judge.

A LADY priding herself on her geography, seeing a candle aslant, remarked that it reminded her of the "Leaning Tower of Pisa." "Yes," responded a wag, "with this difference, that is a tower in Italy, while this is a tower in grease."

A COLORADO ROMANCE.—Seven miners, exploring the mountains, found an enormous chunk of gold. They fought for its possession till they were all killed but one. It was too heavy for him to carry off, so he sat down beside it and starved to death.

"Is my face dirty?" asked a young lady from the backwoods while seated with her aunt at the dinner table on a steamboat running from Cairo to New Orleans. "Dirty? No. Why did you ask?" "Because that insulting waiter insists upon putting a towel beside my plate. I've thrown three under the table."

GOLDSMITH mentions an old lady in the country who, having been given over by her physician, played with the curate of the parish to pass the time away. Having won all his money, she next proposed playing for the funeral charges to which she would be liable. Unfortunately, the lady expired just as she had taken up the game!

THE other day some ladies were out visiting. There being a little two-year-old present, one of the ladies asked him if he would not kiss her. He answered, "No." "What is the reason you will not kiss me?" "I am too little to kiss you; papa will kiss you; papa kisses all the big girls." He was permitted to play with his Christmas tree.

"SARATOGA and Newport—you've seen them,"
Said Charley one morning to Joe;
"Pray tell me the difference between them—
For bother my wig if I know!"
Quoth Joe, "'Tis the easiest matter
At once to distinguish the two—
At the one, you go into the water;
At the other, it goes into you!"

THE famous Duke of Queensbury was one of the last noblemen who kept a running footman. Once, when he was about engaging one, he made the man put on his livery and run up and down Piccadilly. The Duke watched the proceeding from his balcony, and called out, "That will do, you will suit me very well." The fellow answered, "And so your livery does me," and then ran off, and was never heard of again.

A WISCONSIN DUTCHMAN—evidently a sensible man—being asked what religious denomination he thought was the nearest right, said: "Ven ve goes to Milwaukie mit our wheat, some goes one road and some anoder; but ven ve gets dere, nobody asks us vich vay ve come, but only *looks to see if your wheat is goot!*" That's it; see that your "wheat" is good; that is the *essential* thing. At the same time, when you are "going to Milwaukie," we would advise you also to take the "road" which, all things considered, you deem the best.

A MAN in New Orleans accidentally swallowed six false teeth last week, and now he bolts his food right down in lumps, and chews it after it reaches his stomach. He says he is satisfied, because he can go clear through the bill of fare, and get back to business before the other boarders get their potatoes mingled properly with the gravy. He likes it first rate, and he has taken out a patent for the principle. State and county rights for sale.

THERE is one good thing about the Indians. They make no invidious distinctions against their women. Every squaw in the whole tribe has her rights. Each brave sends his wife out into the field at daylight, and makes her brandish a hoe while he gambles for scalps and destroys commissary whiskey; and then at nightfall he comes and sits on the front door steps and smokes, while in the depth of his unspeakable affection, he watches his wife wheeling home potatoes in a push-cart. How much does this noble generosity of the red man put to shame our vaunted civilization! Is it not strange that, with all our advantages—with our public schools, our free press, our churches, our Susan B. Anthony "raring" about the land, we should still have to seek an example in the conduct of the untutored children of nature?

Miscellaneous.

THE latest Parisian turn-out is described as "a bamboo dog-cart, on spider wheels, with only room for one inside, and a hollow behind for one's dog."

THE atmosphere is composed principally of two gases mixed together. One is oxygen, the other nitrogen. If you could separate them, and measure them in quart dippers, you would find about a quart of oxygen for every gallon of nitrogen.

IN Boston, one day last week, police officers were stationed on Tremont street for the purpose of taking an accurate count of the travel, and the following was the result: Horse cars, 1,457; vehicles of all other descriptions, 3,699; foot passengers on the easterly side, 7,045; foot passengers on the westerly side, 3,790; making the total of foot passengers, 10,835.

THE PEOPLE OF THE EARTH.—The number who have lived upon the earth, since the creation, has been estimated at about 27,000,000,000,000. This sum, when divided by 27,864,000, the number of square miles, gives 1,314,522,086 to a square rod, and 5 to a square foot. Suppose a square rod capable of being divided into 11 graves, each grave would contain 100 persons; so that the whole earth has been one hundred times dug over to bury its inhabitants, supposing they had been equally distributed. Were the bodies lain upon the surface, they would cover the land to the depth of one hundred feet.

VALUABLE TABLE.—The following table will be found valuable to many of our readers:

A box 24 inches by 16 inches square, and 28 inches deep, will contain a barrel.

A box 26 inches by 15½ inches square, and 8 inches deep, will contain a bushel.

A box 12 inches by 11½ inches square, and 9 inches deep, will contain a half bushel.

A box 8 inches by 8 inches square, and 8 inches deep, will contain a peck.

A box 8 inches by 8 inches square, and 4⅛ inches deep, will contain one gallon.

A box 7 inches by 8 inches square, and 4⅛ inches deep, will contain a half gallon.

A box 4 inches by 4 inches square, and 4¼ inches deep, will contain a pint.

HOW TO JUDGE THE WEATHER BY THE SKY.—The colors of the sky at different times afford wonderfully good guidance. Not only does a bright sunset presage fair weather, but there are other tints which speak with clearness and accuracy. A bright yellow in the evening indicates wind; a pale yellow wet; a neutral gray color constitutes a favorable sign in the evening—an unfavorable one in the morning. The clouds are full of meaning in themselves. If they are soft, undefined and feathery, the weather will be fine; if the edges are hard, sharp and definite, it will be foul. Generally speaking, any deep, unusual hues betoken wind and rain, while the more quiet and delicate tints bespeak fair weather. Simple as these maxims are, the British Board of Trade has thought fit to publish them for the use of seafaring men.

TO LIGHT A DARK ROOM.—The London *Builder* recommends a plan for lighting a dark room in which the darkness is caused by its being situated on a narrow street or lane. The *Builder* says if the glass of a window in such a room is placed several inches within the outer face of the wall, as is the general custom in building houses, it will admit very little light, that which it gets being only the reflection from the walls of the opposite houses. If, however, for the window be substituted another in which all the panes of glass are roughly ground on the outside, and flush with the outer wall, the light from the whole of the visible sky and from the remotest parts of the opposite wall will be introduced into the apartment, reflected from the innumerable faces or facets which the rough grinding of glass has produced. The whole window will appear as if the sky were beyond it, and from every point of this luminous surface light will radiate into all parts of the room.

AN IMPORTANT SECRET FOR YOUNG MEN.—The thing for every young man to strive for, if he be ambitious of pecuniary success in this world, is a specialty in his business. No matter what trade or profession he may choose, let him adopt some particular branch or department of it in which to render himself famous. He may then render himself necessary to those who employ his services, and thus receive his own price for that which he does particularly well. Without this special superiority, he comes into competition with the great mediocracy, and must expect a mediocre compensation only in return. The pleasant eminence of excellence, however, is not to be gained by wishing merely. It requires good hard work, and plenty of it. The world does not pay people for being idle, nor for that which is idly done. There is labor to be done after they are learned, and the beginner should never flinch from it, for it is only by his own exertions that he can attain the specialty that is to bring him future honors, and better yet, future gold.

Wanted.

Short Advertisements inserted in this column at 25 cents per line each insertion.

WANTED—Carriage-makers and painters to know that the second edition of our Book of Designs is now ready. It contains over 200 new and elegant designs, sent per mail on receipt of 50 cents. Address,

CHARLES PALM & Co.,
118 Main street, Cincinnati, O.

☞ Attention is directed to advertisement of M. S. Hearick, Warsaw, Ky., who offers his establishment for sale.

CASH

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY

SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, April 20, 1870.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.25; 1⅛, $3.75; 1¼, $4.50; 1⅜, $5.50; 1½, $7

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.00; 1⅛, $4.50; 1¼, $5.50; 1⅜, $7.25; 1½, $9.25.
" Improved taper, ⅞ and 1 in., $4.50; 1⅛, $5; 1¼, $6.25; 1⅜, $8; 1½, $10.
" Half pat., ⅞ and 1 inch, $5; 1⅛, $5.75; 1¼, $7.25; 1⅜, $9; 1½, $11.

Axles, Long half pat., ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $8.75; 1⅜, $10.75; 1½, $13.50.
" Plain long taper, ⅞ and 1 in., $5.00; 1⅛, $6.00; 1¼, $7.50; 1⅜, $9.25; 1½, $12.

Axles, Improved taper, long, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10; 1½, $12.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim. 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 45 per cent. discount from list. Clip King bolts, per dozen. Nos. 1 and 2, $3.25.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.

Buckram, per yard, 15 to 18c.

Carpet, per yard, Brussels, $1.50; Velvet, $2.30 to $2.50. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $1.75: Fast Colored Zephyrs $1.50; Browns, same price.
" body, per yard, indigo wool-dyed, $2.50 to $3.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.00 to $1.38 per dozen.

Damask, German cotton, double width, per piece 30 yds., $14.00; do., Union, $28: English worsted, from $1.50 to $2 per yd; Rattinet, 50c. to 70c. per yd.

Dashes, buggy, per dozen, rough, $18; silver plated, $27. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.15 to $1.75.

Enameled cloth, per yard, muslin, 5-4, 30c.; 6-4, 45c.; drilling, 5-4, 42c.; 48 inch, 45c.; 6-4: 58c.; duck, 5-4, 55c.; 50 inch, 58c.; 6-4, 65c.; pat. tan back muslin, 5-4, 40c.; do., drill, 5-4, 55c.; 48 inch, 60c.; flock drill, 48 inch, 90c.; do., muslin, 80c.; vul. rubber drill, hea., $1.30; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 13c.

Fifth wheels, Cincinnati pat., per doz., ⅝, $14; ¾, $15; N. York pat., ⅝, $11; ¾, $12.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch. $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch. $3, per set; combination, one or two seats, $5.75, per set.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
" Button-holes, pat., metal edge, gum centre. A new article: for quickness and simplicity of application it has no equal Price, per gross, $3.75.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $30.

Leather, per ft., dash, No. 1, 13c.: do., No. 2, 11c; railing, 22c. and collar, 22 cents; enameled top, No. 1, 23c.; do., No. 2, 20c.; enam. trimming, 2 c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
" spoke ten. machine, each, sm., $15; large, $25.
" bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 4½c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $4.50; 2½ to 3, $5.

Screws, Eagle, gimlet point, wood. 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in., $9; No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright. $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
" Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $1.50.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2.15; 1⅛, $2.50; 1¼, 2.65.
" close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25
" close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
" ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
" neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6.
" Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.00; 5 bows, $9.00.

Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $13.50
" Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37.
" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 14c.; Bright, 15c.; 1¼ inch, 1c. per lb. more.
" Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 22c.; 1½, 3, 4 and 5 plates, not shorter than 33 inch, 21c.; shorter than 33 inch, per lb. extra. 3c.
" Bright oil-tempered, per lb., 1¼ inch, 18c.; 1½ inch, 17c.
" Spring Perch Co.'s, tempered, 28c. to 30c.
Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50; ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top holders, Thomas patent, buggy, $5 each; extension, $7 each.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1.25; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.25; No. 30, $1.45; No. 35, $1.60; No. 40, $1.80.
" Shoe, H. B., per lb., No. 10, 60c. to 82c.; No. 3, $1.00 to $1.10; No. 12, $1.30.
" dark blue, per lb., No. 10, 90c.; No. 3, $1.15; No. 12, $1.35.
" machine, Marshall's, Shrewsbury, black, No. 432, $2.50; No. 532, $3; No. 632, $3.35; white and black same price.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.45; No. 30, $1.60; No. 35, $1.80; No. 40, $$2.10; white, 25c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb., No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.50; black, silver top, $1.75.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.50; buggy, $3.50; post, 2 setts in bundle, $3.00.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
" ash, red oak and common hickory, per sett, 1,
" 1⅛ 1¼, $1.25; 1⅜ $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
" sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2.25 per set.

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
" sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch. $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
" " double " $4.50 "

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

PAINTS AND VARNISHES.

CORRECTED BY FELTON, RAU & SIBLEY.
136, 138 *and* 140 *North Fourth Street.*

VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $9.00; Noble & Hoar's English, $7.50; black enamel English for carriage tops, $7.00; black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $5 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.; refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., 90c.; No. 1 Prussian, 55c.; No. 2 Prussian, 40c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 12c.

Greens—Pure chrome, L. M. & D. shades, per lb., 18c.; extra dark, 30c.; bronze or quaker, 20c.; pure emerald, 40c.; pure Paris, 40c.; Brunswick, 10c.

Reds—Best carmine, No. 40, per ounce, $1.25; fine crimson or claret lake, per lb., $3.00; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 40c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.10; deep, $1.05; Ger. gotn. pale, $1.20; deep, $1.10; Chinese, $1.20; Trieste, $1.20; Italian, 45c.; American, 30c.; Eng. Ven., 5c.; red lead, 14c.

Whites—Pure lead, per lb., 11½c.; Colorado lead, 10½c.; Nevada, 9½c.; Dakota, 8½c.: Cremnitz, for striping, 35c.: whiting, 4c.; pure dry lead, 12c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 30c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

Miscellaneous—Drying Japan, $1.75; turpentine, 60c.; linseed oil, $1.10; English filling, per lb., 14c.; English rubbing stone, 12c.; pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c.; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.; 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1; Camel's hair striping pencils, assorted, per dozen, 45c.; sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8; small, $6.50.

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SIZES—Measuring on bottom, from outside to outside.

Length.	Width.	Length.	Width.
21 inches	15 inches.	2 feet 10 inches	16 inches.
2 feet 1 inch	14½ "	2 " 11 "	16 "
2 " 4 inches	16 "	3 " — "	16 "
2 " 6 "	16 "	3 " 2 "	16 "
2 " 7 "	16 "	3 " 4 "	16 "
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2 " 9 "	16 "		

IN GIVING ORDERS, STATE WHETHER YOU WISH HOLES PUNCHED IN RIM FOR TOP, OR NOT.

PRICE PER DOZEN, (BOXED) ON CAR, $42.00.

SILVER-PLATED HANDLES PUT ON, WHEN ORDERED, AT FIVE CENTS PER INCH.

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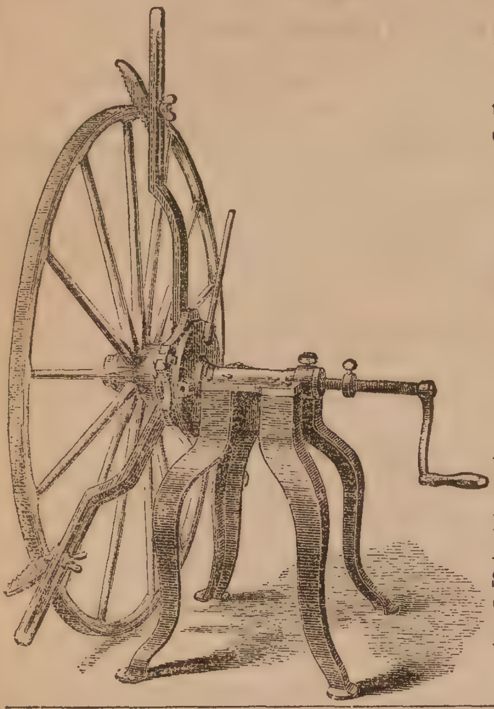

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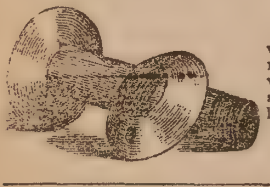

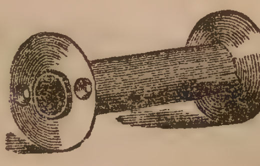

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The most perfect thing of the kind ever made; no wheel is complete without it; secures perfect tightness in the hub without wedging or other appliances which cause deviations from the exact centre; a neat and workmanlike finish, and a perfect antidote for loose boxes. For circular and other particulars, address

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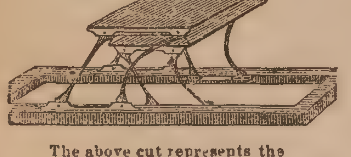

The above cut represents the
Mellinger Patent Jump-Seat
When adjusted for a single seat.

The above cut illustrates the
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When arranged for two seats.

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THE "MELLINGER" PATENT JUMP-SEAT,

Which is acknowledged, by competent judges, to be altogether *superior* to any other jump-seat in use. Both ends of the legs or supports being accurately fitted in sockets, imparts to the "MELLINGER" PATENT JUMP-SEAT great strength and steadiness whilst it entirely prevents any lateral motion or *rattling*. These seats are especially adapted to Buggies Jenny Linds, Rockaways Germantown and Station Wagons. May be readily attached for use as jump-seats, or as single or double seats in the ordinary way. For Circulars, containing price lists, &c., apply to, or address

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(UNEQUALED,)

TURNS SPOKES OF ALL SIZES,

Whiffletrees, Spring-bars, Hammer, Sledge, Pick, Plow and Yankee Axe Handles, Plow Beams, Wagon Axletrees, &c.

E. Y. WISELL.
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FOR SALE.

A rare chance at Warsaw, Ky., for a Carriage Maker with a small capital to secure a good location and a good trade already established. Those wishing can learn the particulars why I wish to sell, &c., by addressing

M. S. HERICK,
March 19, 1870. *WARSAW, KY.*

COACH-MAKERS'
INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 11.

AUGUST, 1870.

$3.00 PER ANNUM
Always in Advance.

RUNNING IN THE OLD RUTS.

We are apt to boast of living in an age of progress, a time in which the mind is unusually active, and through years of severe training has become too active for the body. Our children make merry over the quaint old notions of their grand-relatives, and very modstly correct their parents in many things, as in the pronunciation of certain words, the false theories taught a generation earlier, and still held sacred by them, because the impressions made in their younger days were more lasting. There is a natural tendency to desire to run in the old ruts, for it is humiliating to give up to a new idea, even though it be demonstrated to us as clearly as the light.

The peoples inhabiting different countries, under the influence of climate and the teachings of those who control the masses, present a wide difference in their tastes, in their manner of performing mechanical work, and in their estimates of matters which may be brought to their attention. They each were started in life with certain surroundings, and brought into contact from day to day with customs peculiar to their own country, and in after life they find it almost impossible to lay aside errors which were imbibed in youth.

In faith and morals, the power exerted by early teaching and example is felt, and its effects more distinctly seen than in the less important matters which occupy our attention in the daily routine of life; and in the majority of cases it may be attributed to the desire to run in the "old rut" through force of habit, rather than to inquire searchingly after truth. But as almost every persuasion gives shape to the plastic minds of the young, in moulds of their own pattern, and burns them into an almost indestructible form by the *terrors* of the law, it is well to be charitable toward all, of whatever form of belief.

But we find that men become set in their opinions on matters of less importance, and will only give way after the tide of opinion, based on the truth of the new theory, has grown deep enough to carry them along despite their efforts to swim against it. When Fulton, but a comparatively few years ago, proposed to propel vessels by steam, many reputed wise men called him a madman; and no doubt some of them thought it was interfering with providential plans to attempt to move through water, unless propelled by swelling sails filled by heavenly breezes. They were anxious to "keep in the old rut," but were pushed aside by the eager throng, who saw in the distance the immense value of the new idea, and to-day, if the labor performed by steam should cease, the energies of the world would be paralyzed. There is scarcely an improvement that has been made but what, on its introduction, met opposition from those who were fearful of being injured thereby. They took a narrow, contracted and selfish view of the whole matter, and summed it up by a wise shaking of the head, and the "mind I tell you *now*" prophetic style. A few years passes away, and these prophets are not anxious to recall their former assertions, their mouths having been stopped by the weight of evidence against them.

The sewing machine was the most bitterly cursed, we believe, of any inanimate worker that ever clicked merrily to the tread of feet or the power of steam. There was raised one dismal howl from some, while on the part of the poor seamstresses a wail came up painful to listen to. Their value they had not dreamed of, and in their short-sightedness they desired to run in the old ruts. Time has dissipated all that, and now they rejoice in the possession of a neat little piece of furniture, which, on being stripped of its outward adornments, discloses a friend "that sticketh closer than a brother," a means of support ever ready, and plying the needle with such busy and untiring fingers as to greatly lesson labor, and do away with the necessity of stitch, stitching away into the night hours.

In the carriage line, one improvement has followed another during several years, until at present an old-time carriage is as much a curiosity to us as were the bears and painted savages Columbus took back with him to Spain to that people.

In America we have probably made more rapid strides, and got more completely out of and away from the old ruts, than they in England or on the Continent. We have had tougher material to form the wood parts of our vehicles, and therefore the distinctive characteristic of our work is lightness. But not many years ago a family carriage put up by our *then* best builders, was a clumsy, high-set, narrow affair, and a *light* buggy, so called, contained sufficient wood and iron to have made three of the present style. And carriage-builders were not hasty in laying aside their clumsy patterns; it was only by little and by little that the patterns were cut down, and the drawing knife pulled with a will in removing all surplus weight. New inventions, patented and brought to the notice of builders, were slow of adoption, but at length one change after another was admitted, until scarcely any vestige of the old-time work remains, except it be that wheels are made round, tops to stand or fall, and seats arranged to sit upon. Short rims gave place to those bent in two halves, securing a continuous straight grain. Machine-mortised hubs, and machine-made wheels, met opposition, but overcame it by good work and cheapness.

Wooden axles to those made of iron and steel; heavy wheels and heavy tires on the lighter class of work, were considered necessary to resist the shock of road obstructions, and to this day there may be found those who cling to the old idea, in bitter opposition to the light, high, vibrating wheel, which either steps over an obstruction, or, if struck near the centre, quivers before the blow, and distributes the shock throughout the wheel, thus relieving the axle and other parts to a considerable extent.

Oil top leather, which, when old, drew the bows and the whole top out of shape, gradually retired before the pliable and handsome enameled article. Patent leather won an easy victory, and the "magic adjective," "patent," appears to many to be a quality of the leather, rather than the word which guarded its manufacture.

Metallic hubs were, at one time, considered a failure; but late improvements on them have shown, that a hub made in part or whole of metal is by far the most serviceable.

Patents, or improvements that are not patented, which propose to revolutionize any old ideas or methods of working, are received differently by different individuals. Those of a "gushing" temperament, who are fond of novelties, will be satisfied with a wordy recital of the advantages to be derived from the improvement, and foolishly part with their money and waste their time, only to find in the end they were humbugged. Patent agents, who are blessed (?) with the "gift of gab," fatten off of this class of persons.

The other extreme includes the "run in the old rut" sort, who think that people knew as much fifty years ago as they do now, if not more. They say, "we were taught thus and so, and see no occasion for changing our plans of operation."

The medium between the two named are those who avail themselves of every help in obtaining a more thorough knowledge of their trade or profession; and when a new idea is presented for their consideration, are slow to decide for or against, unless they can at once apply the test of fixed natural laws, which, when applied, will either accord with or condemn the patent, or suggested improvement. To this class all really valuable inventions must come before they will be generally adopted; for once in their possession, their full merits are searched out, and the community at large eventually benefited.

Tools of various patterns have each their friends—some men prefering one make, and others those quite different. The wooden plane is one which has, until a short time, been found on every bench of workers in wood—those made of iron being pronounced worthless; and doubtless many will wish to continue in the "old rut," although we assert that an iron plane can be procured by far superior to the best wooden one.

Any one who has been a careful reader of the JOURNAL, has noticed the diversity of opinions held by *first-class* mechanics on important matters connected with the construction of certain parts of a carriage, and how loth the disputants were to give way from a position once assumed. They speak from actual every-day experience, on the same kind of work, but under the varying circumstances of their early training, subsequent experience, and their natural or acquired ability in readily seizing upon new methods of procedure, accidentally or otherwise discovered.

It is not absolutely necessary that the mere mechanical operation of doing a piece of work should be the same to insure like good results. It is a well-established fact, among painters, at least, that one may be wedded to a certain pigment or pigments, and work them with perfect success, while another equally skilled artist may be unable to do aught with the same color or colors.

But where a principle is involved, and time, labor and money may be saved, persons should not hesitate to drive out of the "old rut," and come up on higher and firmer ground.

* * *

THINGS OVER THE MOUNTAINS.

We know full well the proneness of writers in describing their travels to make it tedious, and thereby lose its interest, and we shall endeavor, in this sketch, to give the reader only what will be of interest, and shall aim to confine ourselves to carriage making items, knowing full well anything pertaining to the trade will be acceptable.

Business calling us to Cincinnati, we left the office and the home interests of the JOURNAL, with its numerous correspondents, in the hands of P. Allette. The prosperity of the JOURNAL being uppermost with us, we endeavored to improve our opportunities for its advancement, and make the acquaintance of its many friends on the route.

In Pittsburg we found the JOURNAL highly appreciated, and succeeded in adding largely to our subscription list. Our advertising pages also show a good representation. The following comprises some of the best carriage manufactories: J. S. Shaffer, C. West & Co., John Napier, West, Sweeney, Skelton & Co., Robert Hare, and Stoner & Marlatt.

Allegheny City, across the river, has three good shops—Workman & Davis doing the most extensive business; having recently enlarged and re-built their factory, they are prepared to do a large business, and building first-class work *only* have made for themselves a wide reputation. Wm. M. McCallen, and Knock, Good & Calhoun are doing a fair business and increasing their facilities.

In Salem we found two shops—H. Judd & Co., and D. Eldridge. Silver & Deming, manufacturers of boxing and other machines, have their works here, and are running full force. At Alliance the principal shops are, Lee & Co., and Caris & Carrington, who do good work, and keep up to the times.

Canton, O., is located in Stark County, on the Pittsburg, Fort Wayne and Chicago Railroad, and contains from 10,000 to 15,000 inhabitants. Remaining here over the Sabbath we had a better opportunity of seeing the place than many others we visited, and was so favorably impressed with the town and its inhabitants, that we have given it more than a passing notice. The churches are very fine, hotels good, court house an ornament to any town; in fact, the general appearance of the place, to a stranger, is favorable. There is but one carriage manufactory of note, Messrs. Werts & King, who have just completed a portion of what will be the finest shop in Eastern Ohio. It is built of brick, three stories high, 45 by 115 feet. The windows and doors are all arched, presenting a very fine appearance. The rooms are well lighted and judiciously arranged. The smith shop contains six fires, and plenty of room for hanging up and finishing. The show rooms and office will be finished in good style, making the whole one of the most desirable shops in the country.

This firm has been located here for the past 11 years, and their reputation for good work has become so wide spread as to oblige them to increase their facilities for manufacturing, which they have done in putting up a building that is an ornament to the beautiful town of Canton, which, in many respects, older cities in the East can take lessons from. The members of the firm are practical men, superintending, personally, all departments of the business. We would also say that it has not been our pleasure to meet a more agreeable set of men than those in their employ, among which we found our old friend Kemp, formerly of the City of Brotherly Love, who we were very glad to meet.

So far as the JOURNAL is concerned this is the banner shop for subscriptions, every jour. (with one or two exceptions) subscribing. Our readers must excuse us for dwelling so long on Canton. We will try to be as brief as possible, although the reception we met in every place would furnish subject matter for a lengthy article.

In Massillon there are three shops, Walser & Grimmesey doing the largest business; having just built a new shop they are hardly in full working order. Success attend them.

Wooster, O., is somewhat noted for carriage making. There are two shops, John Beistle and John Wilhelm. As in other places, business has been good this spring, and everything sold out. In Pittsburg, and all the towns we visited in Ohio, nearly everything in the carriage line has been sold, and the regret is that more was not manufactured.

In Mansfield carriage building is far behind most other places of its size. There are several shops where they make carriages, but not a good shop exclusively for that business, here in a city of 12,000 or 15,000 inhabitants, and a rich country all around.

Delaware, O., is a thriving place. Messrs.

Evans & Carnahan supply the demand for carriages.

Columbus, the Capital of the State, (where we see gentlemen in striped trowsers occasionally,) has several good shops, the largest of which is E. & H. F. Booth's; besides their very large factory they have opened a repository on High street, below the State House, but with all their manufacturing resources they are unable to keep, at present, much of an assortment on hand. Peters, Benns & Co., the next largest, we took occasion to mention last month in connection with Peters' Dash. Thos. Anderson is doing a small but good business, and making for himself a name for good work.

In Urbana we found two shops, Warren & Gaumer, and Heiseman & Aughenbaugh, and although there but about one hour, secured quite an addition to our list of subscribers.

Springfield contains two large and one small shops. The name and style of the firms have somewhat changed. One is known as the Driscoll Carriage Co. They are doing a large business, and running a number of hands. Mr. West is about taking two young men in with him. They also have a large factory. A. Lawrence is not manufacturing so extensively, but is getting a fair share of trade.

Our next stopping place was Dayton, O., one of the prettiest towns in the State. Here we found some of the finest factories anywhere on our route; the largest of which is A. & F. W. De Camp's, built in the latest modern style, 65 feet front, and 210 feet deep, four stories high, containing about 50,000 square feet of floor, and running about 75 hands, a large portion of whom are regular readers of the Journal. John Cohan & Co. occupy a large shop nearly opposite De Camp's; though not presenting the same show, is a large, well arranged factory. Conover & Smith is a well-established firm, and have a very convenient shop, and calculated to turn out considerable work. Garrety & Weaver also do a good business, and are pleasant, agreeable men. W. W. Phillips is not calculated to favorably impress a stranger, though to acquaintances is doubtless communicative and agreeable. He is doing a fair business. Our subscription list in Dayton is large, and of some benefit to the postal department.

In Dayton we find the large felloe and spoke factory of S. N. Brown & Co. A finer building of the kind it has not been our pleasure to see anywhere, of which we shall take occasion to speak more particularly hereafter. Mr. Phelps, of the firm, with whom we became acquainted, is calculated to impress favorably all with whom he has to do. This is, to all intents and purposes, a first-class house, strictly reliable, and deservedly reaping the benefits of liberal advertising and upright dealing.

Zwick, Pinneo & Daniels, our advertisers, have their factory here also; though not so extensive, or buildings so expensive, are receiving their full share of trade, and making for themselves a wide reputation for wheels or wheel stuff. There are several varnish factories located here, most of which turn their attention more especially to furniture or car varnishes. The "Coe" drill and "Bates'" drill are both manufactured here.

Indianapolis has probably the largest carriage factory in the State. Shaw, Lippincott & Conner's being 92½ feet front, 195 feet deep, most of it four stories high, containing about 54,000 square feet of floor.

Although we received nothing but marked cordiality during our whole trip, yet to this firm we feel specially indebted for their marked interest in our success. Never before had we the privilege of canvassing a factory on the same terms, the proprietors announcing that they would pay 25 per cent. of every subscription secured in the shop. The result was a very large number of their employees availed themselves of the opportunity of getting the Journal on such reasonable terms, and, as in many other places, the firm gave us their check for the whole amount, thereby saving us considerable trouble in collecting. S. W. Drew still occupies his old stand, and running his usual number of hands. Geo. Lowe & Co. have a very convenient and well-arranged factory; though not so large as some others, it is well adapted to the business. Mr. Lowe is longer known to the carriage trade in Indianapolis than any one in the business, and with Mr. Bremmerman's superior taste in construction, they will doubtless make for themselves a large and profitable business. G. Miller does not occupy as good buildings, but is doing a good deal of business.

Geo. K. Share & Co. are the principal dealers in Coach-Makers' goods, and keep fully up to many Eastern establishments in stock and lowness of price. The Woodburn "Sarven Wheel" Company have one of the largest wheel and spoke factories in the country located here. This company have an establishment in St. Louis also, giving employment to a very large number of men, and supplying the demand over a very great extent of country with the celebrated "Sarven Wheel."

Connersville, Ind., has but two shops, J. B. McFarland's, and W. P. & A. Applegate's. The former doing a good business—the latter closing up on account of the death of one of the firm. The manufactory of the celebrated Root's blower is located here, of which we may have more to say hereafter.

Cincinnati, the principal object of our trip, was the last on the list, though not least in size or importance, so far as carriage making is concerned; we shall, however, be obliged to make our following notes as brief as possible. In styles of work Cincinnati and Indianapolis are fully up to Eastern cities, and, in some respects, excel in light work.

John Curtis, J. W. Gosling, Geo. C. Miller & Sons, B. Bruce & Co., C. Behlen, H. Niemeyer, J. Roberts, B. Veerkamp, W. H. Brickel & Co., J. Wiltz, J. R. Shannon, M. Forbes, Kinker & Co., J. K. Skaats, G. Jacobs, and Allbright & Newman comprise the principal carriage factories. Crane, Breed & Co. have a very large establishment for the manufacture of hearses, and are doing a heavy business in that line and in metallic burial cases.

During our stay we made many new acquaintances and renewed old ones. Some of the largest coach factories in the country are located in Cincinnati, and so far as our experience goes, a more sociable, generous, and obliging set of men are not to be found than the Cincinnati carriage bosses and foremen.

The "Royer Wheel Company" complain heavily of too many orders, their greatest difficulty being the want of facilities for manufacturing fast enough; but when we were there, arrangements were made for building an addition to their already extensive works, that will enable them to meet promptly all demands on them.

The Journal has hosts of friends all through this section of country, and it is one of the easiest things to canvass for. Our success has been far beyond our expectations, and the recollections and incidents connected with this trip will long be green in our memory. To our genial host at the "Fry" House, and to those who have manifested so much interest in our success, wherever we have been, we shall gratefully remember, and hope to be in a position, at some time, where we can show our appreciation other than by thanks.

GLEANINGS.

No rain in Ohio for several weeks previous to June 5th; consequently the carriage season opened soon, and nearly everything sold out by the middle of June. * * West, Sweeney, Skelton & Co., Pittsburg, are doing a thriving business for new beginners. * * Workman & Davis, Alleghany, are fitting up their shop in good style, and selling all the work they can make. * * Carriage-makers will find the "Merchants' Hotel," Smithfield st. and Third avenue a good place to stop at when in Pittsburg. * * The "American Girl," lately published in the Journal, has been all the rage in Alleghany this spring; the supply not being equal to the demand. * * A good deal of Wilmington work is sold in Pittsburg. * * The coach-makers of Amesbury, Mass., have found the cuts in the Journal very convenient to transfer to their circulars. We like to see them use the Journal to their advantage, especially those that subscribe for it. We think, however, it would have been to their advantage to have used our cuts, and saved the expense of engraving them anew. * * In some places in Ohio we find they drive light spokes with the broad axe. Will not some of these *progres-*

sive wheelers give us their ideas of making a wheel rim-bound, and drawing it down with the tire, as suggested by "Progress" in July number. * * Salem, O., is noted for its extensive manufacture of patent tools used in coach factories. * * Pittsburg as black as ever. * * If a carriage-maker wants to find a friend in Wooster, O., inquire for George Wilhelm. Our word for it, he will use him right. * * Loudonville, O., is finished. * * Step covers are all the rage in Cincinnati. * * Tough beef is no rarity in Eastern Ohio. * * The sheet-iron carriage seat is a good thing, and should be used by all coach-makers. * * Pittsburg axles and springs are thought superior to all others by many coach-makers West. * * Wooster and Mansfield, Ohio, need new court houses, such as adorn their neighboring city of Canton. * * Alliance, O., keeps fully up in late styles and fine buggies. * * J. K. Skaats has opened a shop on Fifth street, near Main, Cincinnati, O. * * The Sængerfest made Cincinnati a lively place for several days the third week in June. * * The JOURNAL has a very large circulation in Ohio. * * The Cincinnati carriage bosses are a very sociable, accommodating and agreeable set of men. * * S. N. Brown & Co., Dayton, Ohio, have the finest wheel and spoke factory in the State. * * Mr. Groot, foreman for J. W. Gosling, Cincinnati, O., has invented a spring to be used in place of a back bar, which is very desirable. * * Wooster, Ohio, has as jolly and whole-souled set of journeymen as any other city, Canton or Springfield not excepted. * * The "Murray House," Springfield, Ohio, and the "Doup House," Dayton, O., are good houses, and reasonable in price. * * B. Bruce & Co., Cincinnati, O., are doing a heavy business. * * The "Slawson" boxes, as used on most of the street cars in Cincinnati, are a nuisance. * * Sewing machine wagons are manufactured very extensively in Dayton and Indianapolis. * * Springfield, O., has two large carriage factories. * * Our old friend, E. R. Carson, is as smiling as ever, and still using the shears and tack hammer in Connersville, Ind. * * Dayton, O., is a very pretty place. * * The "Sarven Wheel" has a tremendous sale in the West. Why is it not used more East? * * Our friend Beck, of Springfield, O., is about commencing business. Success attend him. * * Shaw, Lippincott & Conner, Indianapolis, have the finest factory in the State. * * Root's Rotary Blower is bound to supercede the old time bellows in the smith shop. * * Geo. K. Share & Co., Indianapolis, are very pleasant men, and deservedly receiving a large share of trade. * * Oscar Moffett, the noted coach painter, is holding forth at Connersville, Ind. * * Coach-making in Indianapolis has been brought up to a high state of perfection in style and finish. * * Columbus, O., has some good carriage factories. * * A. & F. W. De Camp, Dayton, O., have one of the largest and finest factories we have seen. * * The "Woodburn Sarven Wheel Co.," Indianapolis, have a mammoth concern. * * Geo. C. Miller & Sons have a very large and extensive factory on Seventh street, Cincinnati, O. * * Curtis' improvements in the double perch and combined body loop and sill, are very popular in Cincinnati. * * Twenty-three hours running time between Philadelphia and Cincinnati *via* Pennsylvania Central Railroad. * * The firm of Bremmerman & Renner, Indianapolis, have dissolved, and our friend, Cass Bremmerman has associated himself with Geo. Lowe, and have a fine and well arranged factory. * * The firm of Smith & Forbes, Cincinnati, Ohio, has been dissolved, Miles Forbes continuing the business at the old stand, 103 East Fifth street. Success attend him. * * One more number, and then—then what? Why, we commence the new volume with fair prospects and bright hopes, and those whose time expires with this volume will see to it that their names are forwarded for Vol. VI. We purpose adding and improving continually until we can get no farther. Send in the names early. * * Chas. Palm & Co., Cincinnati, manufacturers and importers of transfer ornaments, have the name of leading the fashions in painting, striping, &c., through the West. They are certainly enterprising men, and keep good stock. * * The "Driscoll Screw Knob" takes well, and the demand increases faster than the facilities for supplying them. Hurry up, friend Driscoll, for coach-makers will have the best when they can be had for such a low figure. * * Great changes have taken place in New York and Boston, of which we are all in the dark, *probably?* * * Crane, Breed & Co., Cincinnati, O., build more hearses than any two factories elsewhere in the United States, and all built to order. * * Weaver & Lanning is the style of a new carriage manufacturing firm, whose place of business is at 211 & 213 North Broad street, Phila. * * Thompson, Paschal & Co., Wilmington, Del., contemplate building a new shop near the site of their present place of business. * * Jones Guthrie is remodeling and improving his old stand, and intends making a large addition to his factory. * * Extension tops have been in great demand at Wilmington; top buggies proving, in several instances, to be slow sale. * * Cooling & Lloyd's factory always presents a tidy and inviting appearance. They supply a demand for the best work. * * McLear & Kendall have been turning out from thirty to thirty-six jobs a week this season. * * Gregg & Bowe have emptied their warerooms. * * Thomas & Co. occupy the premises formerly in possession of Gregg & Bowe. Mr. Thomas is from Philadelphia. We wish the new firm a successful business career. * * John Green must have been prospered, for he is now erecting a block of houses, and is still driving business. Rich'd Burton, formerly foreman in the body room at this shop, has united in partnership with J. W. Leary, William Hammond and J. A. Kerbaugh, and opened a shop at New Castle, Del., under the title of "Diamond State Coach Works." We trust they may be prospered. * * C. W. Horn has a large and well-appointed factory, and finds ready sale for all his work. * * Robinson & Bro. are pushing their business quietly, yet effectually. * * W. H. Wright is seeking a more desirable location, and, from all appearances, no carriage-making city in the country is doing better than Wilmington. * * Chinamen have been introduced into the heart of New England to supply the places of Crispins, who were "standing out." Wooden nutmegs and Pagan idols have kissed each other. * * Emigrants are arriving at the rate of 10,000 a week. * * C. Schrack & Co. report their "Coralline" as having an extensive sale. This firm manufactures also a wood filling or priming, which, after having been spread over the surface, penetrates deeply, and dries without tackiness, thus being the opposite in nature to the far-famed "Permanent Wood Filling." * * Jacob Rech, Eighth street and Girard avenue, Phila., has lately completed a very fine hearse. It is similar to the circular hearse, which appeared in the April number. Time and money have been lavished on it ,and the result is a first-class piece of work. It is painted plain black, with the exception of the urns, which are touched up with gold leaf. Silver mountings relieve it otherwise * * The best make of fine gold bronze is said to be the "hammer" brand. * * The Brewster Co-operative Carriage Co., of New York, declared their first dividend the second week in July. Each man received 3½ per cent. on his earnings for the six months, amounting in some cases to over $50, and as low as $5. Hereafter, dividends will be declared annually, July 1st. The firm claim that they have realized as high profits as formerly on same amount of business, the gain being in saving of material. * * Judging from an article in the *Stockton* (Cal.) *Independent*, Wm. P. Miller has one of the most extensive carriage factories in that region of country, and being a regular subscriber to the JOURNAL, is enabled to keep up with Eastern cities in styles and finish. * * Spangler Bro., York, Pa., report trade very good with them this spring and summer. * * W. S. Johnson, Henderson, Ky., has invented a nut for iron axles, which we should think, from description, quite an improvement. * * The Fry House, in Cincinnati, is very popular with a certain class. *We* can testify to the good cheer ever to be found under the hospitable roof, the groaning table, and the anxiety to please those who favor the host with a call, provided their name is not John Smith. * * Harvesting wheat in Central Indiana, June 22d.

☞ Try Veatch's PURE GOLD Ornaments.

ONE NUMBER MORE.

Another month, and we shall have reached a new era in the existence of the Journal. Vol. V will have closed. We made no boastful promises in the commencement of the volume of what we were going to do, but have set to work and done the best we could. If our readers do not feel that the Journal has been of material benefit to them, and that they could invest the price of subscription more profitably, amen to it.

Some of our present readers, whose time expires with this volume, will hesitate whether to renew. All we ask is a fair consideration of the question, and in ninety-nine cases out of a hundred the decision will be a renewal; but the worst class for us are those who are satisfied as as to the usefulness of the Journal, but are negligent in notifying us to continue. We make it a rule to stop the Journal when their time has expired, unless notified to the contrary, as we do not wish to follow in the footsteps of older publications, and force the Journal on them, regardless of their wishes, on the ground of a claim for past services. When the time expires for which a person has paid, be the price $3 or $5, each party is free to act as his interest may dictate.

We have endeavored to make the Journal as interesting and beneficial as our limited ability and judgment would allow, and we hope, with the aid of our present corps of contributors and others, to make the succeeding Vol. (VI) more interesting than the present. In size we shall make no change, but in other respects we hope to greatly improve, both as to general appearance and useful matter.

The prosperity that has attended us the past year justifies the additional expense, and so long as the coach-making fraternity shall continue to appreciate our efforts, we shall endeavor to add to the general appearance and value of the Journal. We hope, therefore, that all will see to it that their names are entered for Vol. VI. The proposed changes will be more clearly set forth in next number.

Those of our friends who feel an interest in the prosperity of the Journal, will please commence early to canvass in their locality. We hope to increase our subscription for the next Vol. several thousands. If we have merited your continued efforts by the manner in which the Journal has been conducted the past year, go to work at once, and so far as in our power you shall receive your reward.

* * *

☞ Read C. W. Veatch's advertisement concerning "Pure Gold Transfer Ornaments," at greatly reduced prices.

* * *

☞ Scott & Day keep a heavy stock, and sell at reasonable prices.

ADVERTISEMENTS.

Zwick, Pinneo & Daniels, Dayton, Ohio, whose advertisement has been before our readers for a year past, we found, in our recent visit, full of business, reaping, doubtless, the benefit of their small investment. Never having previously met either of the firm except Mr. Pinneo, (who, we learn, has been lying very ill for several months past away from home,) we made ourselves known, and was made to feel quite at home. A look through their extensive works covered us with wood dust, but we felt very much impressed with the care and attention given to retaining their reputation by furnishing good stock only. For wheels or wheel stuff send to Zwick, Pinneo & Daniels.

Barnett Manufacturing Co., of New York City, are the sole manufacturers of the Rubber Prop Block, for which a patent was granted to William N. Barnett, in January, 1866. Heretofore the blocks have been made three inches in length, finished with a bead on each end varnished ready for use. These have been selling rapidly for some time past, but as all coach-makers do not make their irons the same length, and many thought the blocks too high for common work, the manufacturers have, within a few months past, been making them in another form, of gray rubber in strips two feet long, thereby giving the user the chance of cutting to any length desired, (which is easily done by wetting the knife,) and bringing them at about the same cost per pair as fitting and covering wooden blocks. Probably no part of a top buggy has needed improvement more than the resting of the top on the irons without injury, and with this improvement, together with the Tubular Bow Socket, little damage can accrue to the top while down.

It is unnecessary for us to refer to the merits of the rubber block over the old style wooden one, for every man that is capable of manufacturing carriages will see at a glance that there is no comparison as to durability, finish and adaptation to the work to be performed. Efforts have been made in years past to secure the same results that are claimed for the rubber block, but being only rubber in part, and the same difficulty of fitting and covering, and the liability of splitting, it fell into disuse.

This Company is alive to the wants of the trade, and are furnishing an article that is destined to become general in use. Read carefully their large advertisement. Send to your dealer in carriage goods for a sample, and if they do not prove entirely satisfactory, send bill of damages to us.

For further information, address the Barnett Manufacturing Co., 25 Howard street, New York City.

Wm. & Harvey Rowland are determined that no efforts on their part shall be wanting to place the name of the Rowland Spring before every carriage-maker in the country. Very few dealers in carriage goods, East, West, North or South, but keep Rowland's springs for sale, and men that are so jealous of their reputation as upright business men, and having reached so high a state of perfection in the manufacture of springs, cannot fail to use every means to retain their good name. If you want good springs, look for Rowland's brand. Their advertisement will be found on inside of front cover of the Journal.

The "Royer Wheel Co.," of Cincinnati, is one of the oldest and most reliable concerns in the country. The name "Royer" seems to us should be connected with "Simonton," as we knew it in by-gone days, when wheels were all made in shops. Such a thing as a wheel factory was unknown, but the present establishment of the "Royer Wheel Co." is a mammoth concern compared with the small beginning in the basement of a furniture factory. The "Sarven Wheel" is a specialty, and their orders are so heavy that, with all their energies, they are unable to keep pace with them. We trust, however, that before this reaches our readers, their addition will have been completed, and thirty or forty more men employed. Such perseverance and energy, as evinced by Mr. Royer, deserves, and we are pleased to see is, receiving the reward due.

Carey & Post, Lamp Manufacturers, continue their advertisement, and we are pleased to find them full of orders for work. Although having been in business only about a year and a half, and bearing the name of a former Mr. Carey, who was in the lamp business, that did not stand very high for business integrity, many taking this to be the same party, (in fact this question has been asked us several times even during the last month,) yet, by close attention to business, and promptness in filling orders, this stands to-day one of the most reliable establishments in the country. We hope our readers will reward honest industry, and give them a trial.

Rahway Wood Works have enlarged their advertisement, making a showy appearance. We hope our friends will give them a good share of their orders.

J. R. Denman, Newark, N. J., makes a specialty of Carriage Glass, and can furnish anything in that line, bent, beveled or plain. See their advertisement.

New Haven Steam Saw Mill Co., continue their advertisement also, and our readers in want of wheels or wheel stuff, will find it to their interest to consult our advertising pages.

Carriage Ornaments.—Among our list of advertisers will be found our old friend, C. W. Veatch, who, having lately entered into the Transfer Ornament business, desires the patrons of the Journal to give him a trial. Having seen samples of his ornaments, we can assure our readers they will receive the best article in the market, made of *pure gold.* He being a practical coach painter, understands fully the wants of the trade. Any orders sent him will receive prompt attention. We bespeak a liberal patronage.

Chas. Moser & Co., successors to Hoffman & Moser, No. 61 Main street, Cincinnati, manufacture White Lead, Paints, Putty and Artists' Materials. Our personal knowledge of this house, warrants us in placing it among the first of its kind in the United States. Having commenced business on a small scale, and gradually increased it as a healthy demand for their goods required they should, they have at length taken the leading position in the West.

Their place of business is commodious, and admirably adapted to the exhibition of articles on sale. The stock comprises everything required by the carriage painter in plain or ornamental work, as well as a fine assortment of artists' materials. Their tube colors will be found of great service to the striper and ornamenter, and of the best quality.

Our patrons West, who visit Cincinnati to purchase stock, and do not already deal at this house, should by all means call and make their acquaintance.

The Darrow Manufacturing Co., Bristol, Conn., manufacturers and dealers in Raw Hide Goods, insert in this number an advertisement of their "*Raw Hide Axle Washer*," an improvement, the value of which can scarcely be estimated. It has been in use by a great many carriage-makers for two years or more, and has given satisfaction, because it is always ready for application; and when put to the severe test of every-day service, has given abundant proof of its good qualities. A washer should not be of a spongy or porous nature, as it is required to bear compression, and resist the action of oil. The Raw Hide Washer is free from the objections stated. Read the advertisement in back part of Journal, and give them a trial.

Reed & Bowen's Combined Shear Punch and **Upsetter** is placed before our readers in this number, and, so far as we are able to judge, is exactly the thing needed in every well-regulated smith shop. From circulars received, we see the testimonials of many leading carriage makers, with some of whom we are personally acquainted, and know them to be men that would not lend their influence to an unworthy object. The cut itself is sufficient to satisfy any one that time and money can be saved by using this machine. We hope our friends will take the trouble to investigate the merits of this before purchasing elsewhere. Send for circulars and testimonials.

☞ Sheet-iron Buggy Seats must supersede the old style.

☞ For Bessemer Steel Tire, send to J. A. Griswold & Co., Troy, N. Y.

Fashion Plates Explained.

FOUR-SEAT SWALLOW PHÆTON.

Plate No. 43.—This original design will at once strike the beholder as a thing of beauty. It is very light and graceful in contour, and is calculated for one horse. The manner of hanging it off is on the latest and most approved method, having C springs behind clipped to the axle, the front of springs attached to a cross spring, the front being supported by a single spring. The top is designed to be more compact than is usual, the centre bows being spaced off 20 inches apart instead of 22 inches. It has no doors. Wings cover the hind wheels, protecting the inside of body from flying mud, also serve as a guard for the apparel when entering or retiring from the carriage. This style of C springs produces a very fine appearance, and by being set down lower, the top, when down, does not come in contact with them; and lastly, they are more economical, as there is a saving of one set of springs, and nothing is lost in the easy and pleasant motion which C springs contribute.

Dimensions.—The rockers 1⅛ inches thick, paneled over in front to cover joints of lap. Back quarter taken from 3-inch poplar, swept off, coming in with a scroll in front to ½ inch thick. Width of body to take 43-inch bow. There should be less bevel in the back seat, and less projection over the side than in front, to bring the bows on a line. The seats are of the late French style, having square instead of round corners; the top edge finished with a half diamond moulding coming down in front, and finishing in with the seat valance. Wheels—hubs: 4⅛ by 6½. Front band: 2⅞; back band: 3⅛. Spokes: 1 inch. Tire: ⅞ by 3-16. Axles: ⅞. Back springs: 1¼, 4 plates; first two plates No. 2 steel, the third and fourth No. 3 steel. Front springs: 1½, 4 plates. Wheels: 3 feet 7 inches, and 4 feet 2 inches. Track: 5 feet.

Painting.—Body: side panels, maroon lake. Seats: wine color, the remainder black; the seat skirts and duster may be relieved by striping. Carriage-part: maroon lake, striped heavy lines of black, edged, or distance lined with a light brown tint, mixed of orange chrome, burnt umber and carmine.

Trimming.—Gray cloth.

LANDAU SLEIGH.

Plate No. 44.—As has been our custom heretofore, we introduce, thus early in the season, designs for sleighs, giving ample time for sleigh builders to prepare for the incoming season. This pattern will, when completed, furnish a winter vehicle of massive proportions, possessing a degree of stateliness heretofore unequaled. This being the first Landau sleigh published in America, and as the cost of the body will be about equal to that of a Landau carriage body, we do not expect that it will be built outside of the great sleigh-making centres; but wherever the sleighing season will warrant the building of such fine work, this design will certainly be of value. The boot is brought up very sharp, with rounded neck, being the latest coach style. Lamps are introduced of the column pattern. For hinging, the bows should be made of a straight pattern, so as to draw the front bows on both the front and back divisions of the top when the top is laid down.

Dimensions.—Width of body over all: 50 inches. The turn-under must be governed by the dropping of glass frame. There is a drop rocker under centre of the door. The seats should be constructed to admit of being elevated when the top is down, which was explained in the description of the Elm City Landau.

Painting.—Body: crest panel and lower division of body, English purple lake. The middle division, which is connected with the boot, black: mouldings, striped gold. Running-part: carmine, painted on a dark ground work, striped black and gold. We have selected colors which will agree with the character of the vehicle, (deeming it in bad taste to introduce a display of scroll work and flashy colors,) thus placing this sleigh, in its whole make up, on a par with a fine carriage.

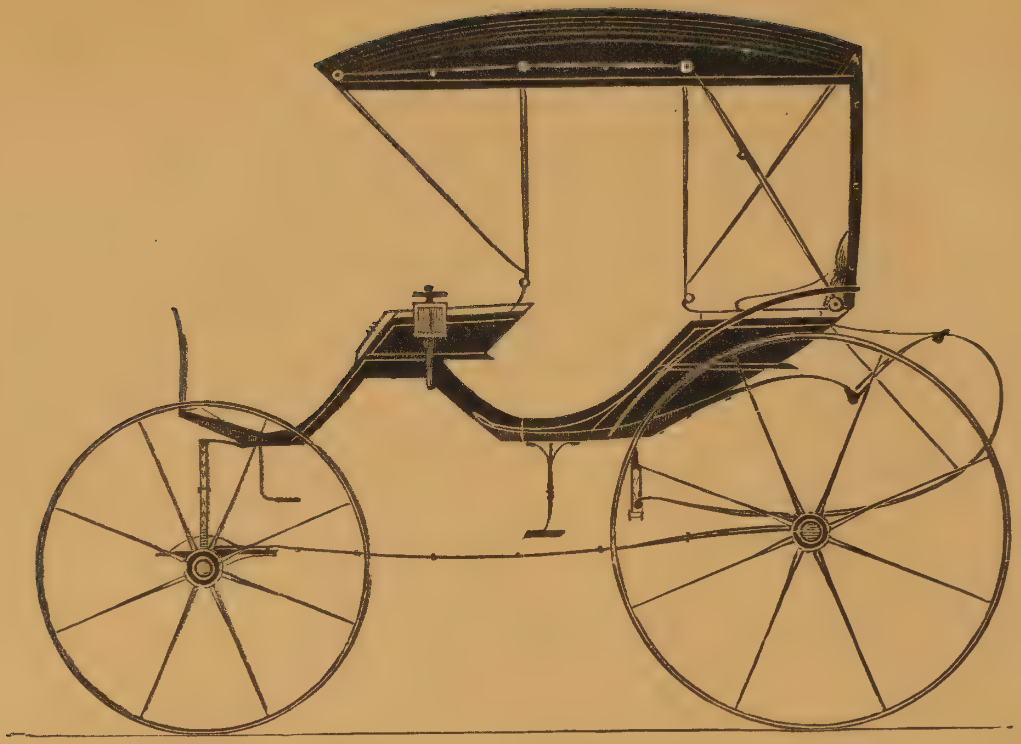
Trimming.—Turkish morocco. There might be an objection to this goods on account of its being colder than others that could be selected, yet in the summer season it would not be liable to damage from moths, and is more durable.

NAUTILUS CUTTER.

Plate No. 45.—The beauty of a cutter depends almost entirely on the style of the body. When it is inclosed by lines which give a jaunty appearance, and the entire finish is of a cheerful order, nothing but the "beautiful snow" is required to have them sell rapidly. The Albany and Portland styles, although so different in their construction, each have their admirers, and will doubtless long continue to be built. The sleighs built at Keene, N. H., resemble the Albany pattern, and are generally very gaudily painted. The Nautilus has the bottom side bent to the same sweep as the Albany cutter. Sides and backs to be taken from thick poplar or white wood to produce a heavy swell. The panels may be fluted, or painted in imitation of flutes. The latter method is probably the most desirable. Track: 39 inches. For shoes, use steel. The front knee should be framed about 3 inches in front of the bearing of runner on the ground.

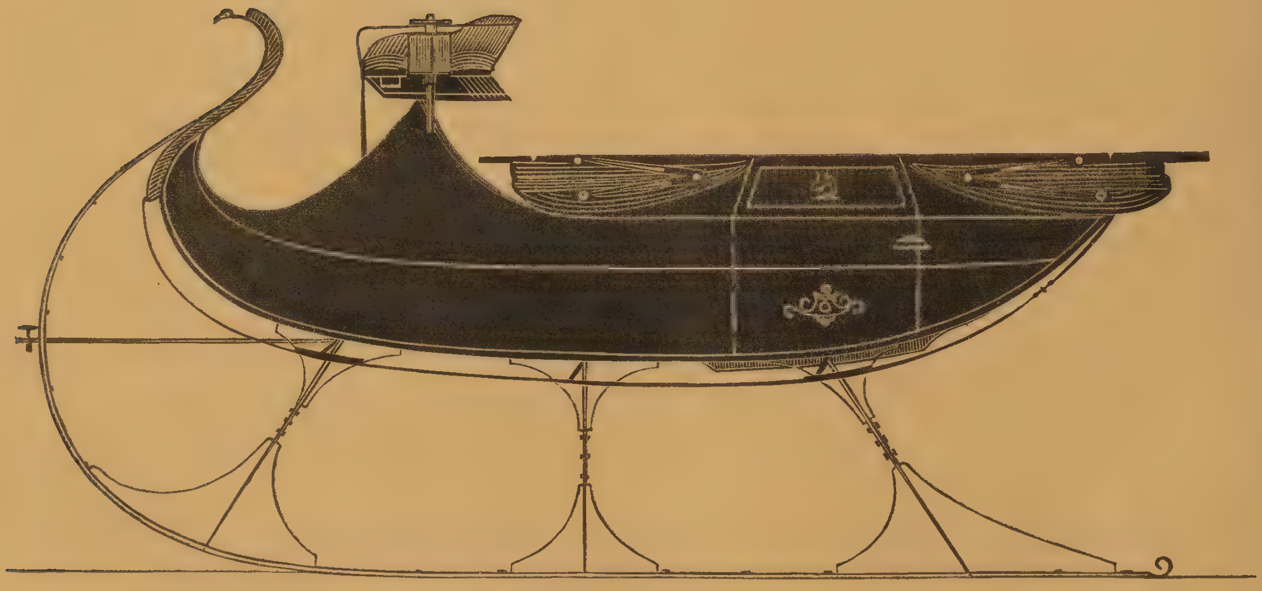
Painting.—Body: white, striping in imitation of fluting, gold. Running-part: drab, mixed of white, umber, yellow and lake, striped with brown and gold.

Trimming.—Crimson plush, with orange plush welting.



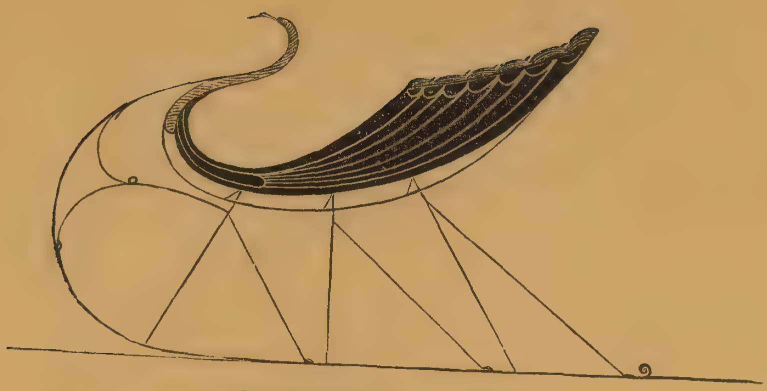
FOUR-SEAT SWALLOW PHÆTON.

Plate No. 43.—Half-inch Scale.—Explanation on Page 166



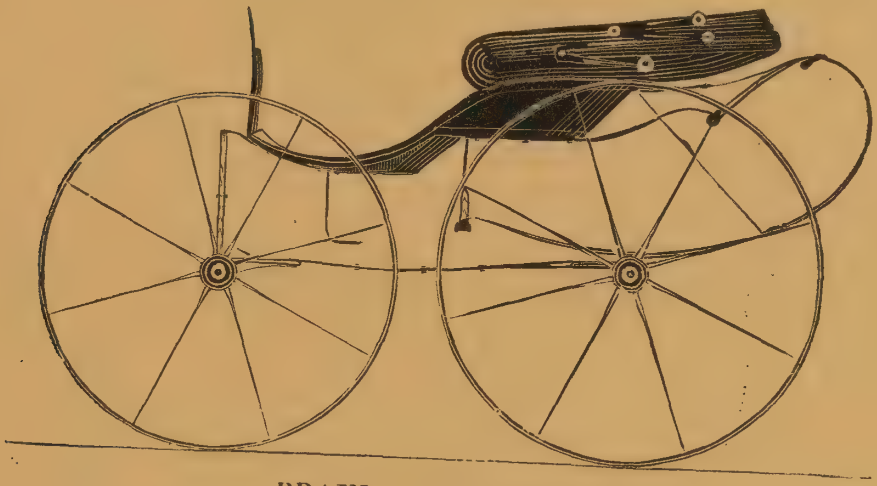
LANDAU SLEIGH.

Plate No. 44.—Half-inch Scale.—Explanation on Page 166.



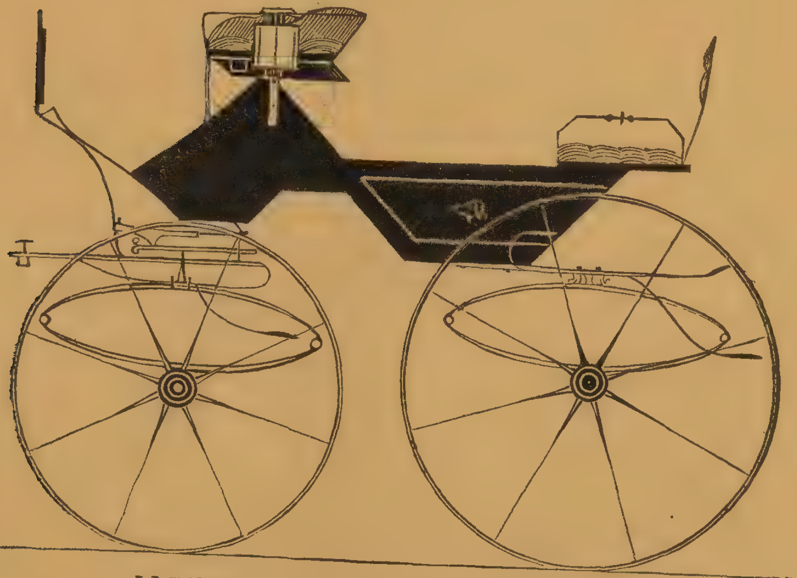
NAUTILUS CUTTER.

Plate No. 45.—Half-inch Scale.—Explanation on Page 166.



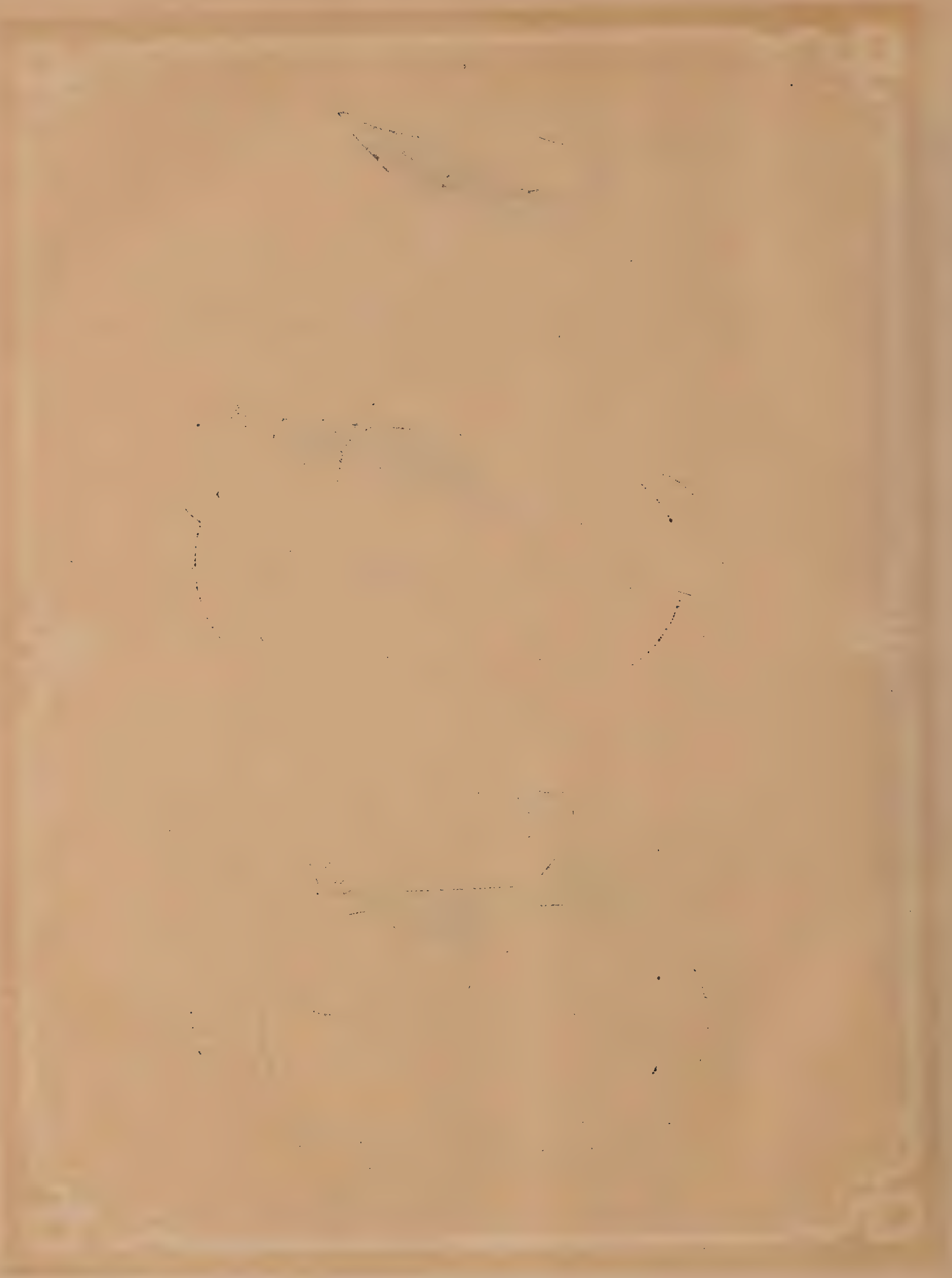
BRAINARD PHÆTON.

Plate No. 46.—Half-inch Scale.—Explanation on Page 167.



LIGHT ENGLISH DOG PHÆTON.

Plate No. 47.—Half-inch Scale.—Explanation on Page 167.



BRAINARD PHÆTON.

PLATE No. 46.—A C-spring phæton, which is a style meeting with warm admirers of late, and it certainly does supply a want long felt by those who spend much of their time in moving about by means of these light vehicles. The body is roomy, and in the shape of front well adapted to the comfort of the rider. The C springs impart a pleasant motion, by far superior to the short, stiff elliptic springs. Width of body to take 43-inch bow. Back quarters and back panel are taken from thick poplar, which produce a heavy swell, and very round corner. The continuation of the back quarter front is ash. Moulding as shown, passing around the body.

DIMENSIONS.—Hubs: 3⅞ by 6½. Front band: 2⅝; back band: 3⅛. Spokes: 15-16. Tire: ⅞ by ⅛. Axles: ⅞, steel. Height of wheels: 3 feet 8 inches, and 4 feet 2 inches. C springs: 1¾, 3 plates; front springs: 1⅜ inches. Track: 5 feet.

PAINTING.—Body: panels, dark brown; gearing: black, striped dark brown.

TRIMMING.—Leather.

LIGHT ENGLISH DOG PHÆTON.

PLATE No. 47.—The original design of the English dog cart was to provide a place for the dogs while going to or coming from the hunt. The dog cart, or phæton, has retained the name in this country, but is seldom built for the special purposes of the hunter. They are used more as a turn out, where a gentleman wishes to drive his own team, and make somewhat of a display. This pattern is light, and well fitted for the requirements of American gentry.

DIMENSIONS.—Width of body: 36 inches. Hubs: 4⅛ by 6½. Front band: 2⅞; back band: 3½. Spokes: 1 1-16. Tire: 1 inch by 3-16. Axles: 1⅛. Wheels: 3 feet 8 inches, and 4 feet. Springs: 1⅜, 4 plates. Track: 4 feet 8 inches.

PAINTING.—Body: panels, Bismarck, dark shade. Carriage-part: Bismarck, striped black and gold.

TRIMMING.—-Leather to match color of panels.

Mounting: gold.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents.*

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "STRAY STEPS," &c.

CHAPTER XV.

Bombay is the most populous city of India, and also one of the most go-ahead live places we met with, as yet, in "our cruise." As we entered the immense harbor day was just breaking, the first streak of light appearing over the tops of the Western Ghants, and by the time our anchor was dropped broad daylight disclosed to us the beautiful wooded summits of the islands on which the city is built, and the bay alive with the bright lateen sails of the hundreds of native cotton boats; while all around us was musical with the capstan songs of all nations, from the American to the Beloochee, and from the Swedish to the Greek.

The appearance of the woods and vegetation is rather more tropical than Indian, but there is nothing tropical and little that is Eastern in the activity and bustle of the bay. The huge steamers and forests of masts, backed by the still more crowded field of roofs and towers, impress you with a sense of wealth and worldliness. Notwithstanding its vast trade Bombay is, for purposes of defence, singularly weak. The absence of batteries from the entrance to so great a trading port strikes eyes that have seen New York and San Francisco, and the marks on the sea wall of Bombay Castle of the cannon balls of the African admirals of the Mogul, should be a warning to the Bombay merchants.

The present remarkable prosperity of the city is the result of the great increase of the cotton trade, caused by war in our own country, during which the British capitalists used their wealth and influence to fully develop the capacity of India for raising cotton which would compete with the American, and thus keep the mills of Manchester running independent of American cotton; that they succeeded, *to a certain extent*, the present prosperity of Bombay is a proof, and to-day cotton is as much king here as it ever was in Mississippi. Cotton has collected the hundreds of steamers, the thousands of native boats, and the fleets of large vessels anchored between the Apollo Bunder and Mazagon. Cotton has built the great warehouses seven and eight stories high. Cotton has furnished the villas on Malabar Hill, that very much resemble the New Yorkers' cottages on Staten Island. The import of cotton rose from 60,000,000, in 1859, to 400,000,000 worth in 1864, while the population of the city rose from 400,000 to 1,000,000 in the same time. Chicago itself never took a grander leap forward than did Bombay between the years 1860 and 1864.

The Parsees are the Yankees of the East, and they control most of the trade in the principal cities of the East Indies. They are shrewd, civil, polite traders, and as sharp as a Chatham Jew. It is said that there is not a pauper in their whole tribe. They are the fire worshippers of India and devils for ornaments of coin, and are also peculiar in their head dress. The ordinary gear of a Parsee's head, by actual measurement, was 140 *yards* long, the material being very fine white India muslin. It is wrapped and twisted and coiled in innumerable folds and rolls around the head. The open-mouthed astonishment of the crowd of sailors around Charley and me, when we measured our Parsee friend's head rigging, and hauled out fathom after fathom, until 70 was counted, may better be imagined than described.

The toddy stands are the peculiarity of Bombay, for which the jolly tars have the greatest interest. On the street corners and in the shady places a toddy stand can always be found, where, for one anna, (three cents,) a good sized cup of toddy or rice whiskey can be had, and I tell you there were a good many annas spent, and a goodly number of cups of toddy disposed of on liberty day; and during the afternoon, when it was pretty hot, we saw some of the officers of our ship bargaining with a fruit peddler; they bought some large spring looking things as big as a cocoa nut; so we thought we would like to have some. We went for the peddler, and asked what he called those things. Durions, from Borneo and Malacca. Are they good? "Oh, yes; very fine, much like im Inglis man, for 6 annas for one durion.

We bought one each, and went to a shady toddy stand, had a toddy all round, squatted down under the tree, hauled out our knives and cut them open. There were 12 of us together, and those 12 cut open the 12 durions together. *Phew! oh, heavens, what a smell.* I had often heard of the delicious fruit and luscious creamy liquid inside of it, and of its disagreeable smell at first acquaintance, but I was totally unprepared for the abominable stench which met my nostrils, when I cut my 3 annas worth. As for the rest of the boys they dropped their's like "hot potatoes," and ran off a short distance, then turned round and looked back. Oh, blow my eyes, what a stink. They must be stale, rotten. Talk about Dutch grocery eggs on the 4th of July, why they are mignionette alongside of them bloody things. Aye, and blarst my eyes, if them officers of ours aint a eating of 'em. By this time I had recovered from the first feeling of disgust, and was engaged in scooping out the delightful contents of the nut with my sheath knife; and I must say that if the smell was bad the taste was the very reverse. While eating it I thought of the nectar of the gods, and of Thompson's vanilla ice cream in New York, but neither could or ever did compare to the durion. The boys could not go them, but a few tried it and were delighted durion eaters ever after while we staid in India.

This fruit grows on a very large tree, principally in the large Island of Borneo. They are as large as a good sized cocoa nut, and covered all over with strong sharp spines, not lapped one over the other as in the thistle-burr, but sticking out stiff and straight in all directions, like a chevaux-de-frize making, almost impossible to handle them without drawing blood. It used to be said that nature placed all the most delicious fruit on low trees, so that man could easily get at them; but how about this, which is placed on trees 150 feet high, accessible only to the *mias* or *ourang outang*, who makes it his favorite food, and where, if one of them struck a man in its fall, he might as well be struck by a shower of bayonets point downward.

There is a splendid line of railroad built from Bombay to Calcutta in the Bay of Bengal, over the Western Ghants. It is run by Englishmen entirely, but was built with native labor, officered by Englishmen. It pays first-rate; but at first the Indian idea of caste interfered with its working. A high bred Brahmin, no matter how poor, would lose caste if he went into company with a poor coolie or low caste man; but the company could not divide the different degrees of caste, but they had first and second *class* cars. If high caste could pay first-class fare he need not ride with low caste, but if he must travel and his stamps were scarce, he had to take the third class or accommodation train. He found the railway saved time and money; he accepted the situation, and to-day a poor high caste Brahmin may be seen fast asleep in a car, his head resting possibly on the shoulder of a poor low caste man or coolie, to touch whom it *used* to be considered disgraceful, so much so that if a coolie saw a Brahmin coming his way, he would have to bow his head to the ground, or if he was in the river bathing, he would hide his head under the water until his high bred superior had passed.

Oh, but those railroads and telegraphs are the great civilizers, and they are fast wiping out and obliterating the musty, feudal, slavish customs and ideas of all lands, and drawing the people of the whole world closer together, and making *one* of many. The day of the millenium is not so far distant, but what you and me, my readers, may see a solidarity of all people, a union of all nations, and a *universal Republic.*

[TO BE CONTINUED.]

* * *

For the Coach-Makers' International Journal.

THINGS WORTH KNOWING.

No. 12.

BY J. H. T.

STATUES

Are defined to be a piece of sculpture, representing a human figure in full relievo; but statue is more scientifically defined to be a representation of some person, distinguished by his birth, merit or great actions, in high relievo and insulate, placed as an ornament in some fine building, or exposed in some public place to preserve the memory of him.

Some are formed with the chisel of several substances, as stone, marble, plaster, &c. They are also cast of several metals, as lead, brass, &c.

Statues are commonly distinguished into four kinds. Those which are less than life; those equal with life; those that exceed life; among the ancients those which surpass the life once and a half, were of kings and emperors, and those double the life of heroes. Those that exceeded the life two or three times or more, and were called Colossuses, as that of Rhodes.

Achillian Statues is a name given to those of heroes, from Achilles.

Allegorical Statues are such as, under human figures or other symbols, represent something of another kind, as age, element, some part of the earth, temperament, &c.

Curule Statues, those where the persons are represented in chariots, drawn by two or more horses.

Divine Statues were such as were consecrated to the gods, as Apollo, Jupiter, Mars, Mercury, &c., demi-gods or heroes, as Hercules, &c.

Equestrian Statues were such as represented some illustrious person on horseback.

Greek Statues, so-called, are antique figures naked. The Greeks representing their deities, wrestlers, &c., in the Olympic games, which last they used to perform naked.

Hydraulic Statues, such as are placed as ornaments on fountains, &c., or that do the office of a jet d'eau pipe, &c., or by any attribute it holds.

Pedestrian Statues, such as are represented as standing on foot.

Roman Statues, such as are represented clothed after the Roman manner. They were of different kinds, as

Paludatæ Statues, those of emperors, with long gowns over their armor.

Loricatæ Statues, those of soldiers, with cuirasses.

Thoracatæ Statues, those of captains and cavaliers, with coats of arms.

Togatæ Statues, those of magistrates, with long robes.

Trabœtæ Statues, those of senators and augurs.

Tunicatæ Statues, those of persons clothed with a plain tunic.

Stalatæ Statues, those of women, with long trains.

Statuary was at first very rude. Dædalus is said to be the inventor of statues; he lived before the destruction of Troy, even before Argonauts; but yet it is certain there were statuaries before him, but he is said to have been the first who endeavored to give them action and motion, and make them appear as if they were alive.

[TO BE CONTINUED.]

For the Coach-Makers' International Journal.

MECHANICS.

BY N. C.

Those who are content to follow the daily routine of their business, (whatever it may be,) going on in the same mill-horse round from year to year, performing the work placed before them without inquiring into its use or application, we invariably find such a one when old age overtakes him, occupying a far lower relative position than when he commenced life as a journeyman; while with the man who aspires to elevate himself above brute instincts, and who seizes upon every opportunity offered for self-culture, his case is widely different. His acquisition of knowledge imparts necessarily an increase of professional skill; his services have a value commensurate with his ability, and he is consequently advanced step by step to the highest rank. Nor need we pause here; his superior intelligence gives him power over the minds of his fellows; and blessed as we are in this decade, having all the privileges of an untrammeled press, and the largest liberty compatible with enlightened morality and virtue, every man is emphatically the arbitrator of his own fortunes, without let or hindrance, to the attainment of the highest social and political distinctions to which his ambition may aspire—if that ambition be but properly directed—its absence forming the only barrier interposed to his elevation to the most truly exalted position of the age.

From this the conclusion is irresistible, that unless the mechanic keeps pace with the progressive spirit of the age in which he lives, by reading, study, and constant *application* of the knowledge thus accumulated, he must retrograde; for owing to the rapid advances daily made in the arts and sciences, it would be utter presumption in a man to say, that after the attainment of a certain amount of scientific knowledge or degree of mechanical skill, the culminating point had been reached, and it were useless to look for further progress or improvement. There is no elevated table land in science where the mechanic can sit down and fold his arms and truthfully say, "this is the acme of perfection in my calling, my fellow workmen can ascend no higher." The motto "Excelsior," (onward and upward,) must be inscribed on his banner, and serve as his watchword, and his mind be steadfastly fixed upon both.

The advantages to the mechanic of accustoming himself to the study of the elementary principles of his immediate pursuits are of the most ennobling kind, whether as regards his intellectual gratification, or the increase of his home comforts. The production of all the kingdoms of nature are in hourly requisition for his most ordinary purposes, and they can be applied only through his power of reasoning, which, if left uncultivated by reading and study, and unimproved by contact with his fellow man, will yield but a meagre and distasteful product, neither capable of being eliminated from surrounding incongruities, nor of being rationally enjoyed.

Independent of the pleasures of fancy and imagination, as well as social converse, he is constituted a speculative being; he does not contemplate the world and the objects around him with a passive or indifferent gaze, as a class of phenomena in which he has no further interest than as they may affect his present situation, and may be rendered subservient to his comfort, but as a system full of order and design.

(TO BE CONTINUED.)

SCALE DRAFTING.

Continued from page 150.

In the conclusion of the article under this heading in the July number, we stated "that no ink is to be used in preparing for a colored draft. The horizontal and perpendicular lines are carried beyond the outlines of the body, thus giving their true direction when the coloring has so far proceeded as to require that they should be added to complete the draft." The draft here given is that of a Clarence coach, and as the manner of laying out has been fully explained in previous numbers, we omit it here, as the principles are the same, and will introduce the subject of coloring by recapitulating the matter which appeared in No. 12, Vol. IV, which defined the kind of brushes, and gave a list of the colors required, as follows:

BRUSHES.

For brushes, you will require fine brown sables in quills, brown dyed sables in tin ferrules, with handles.

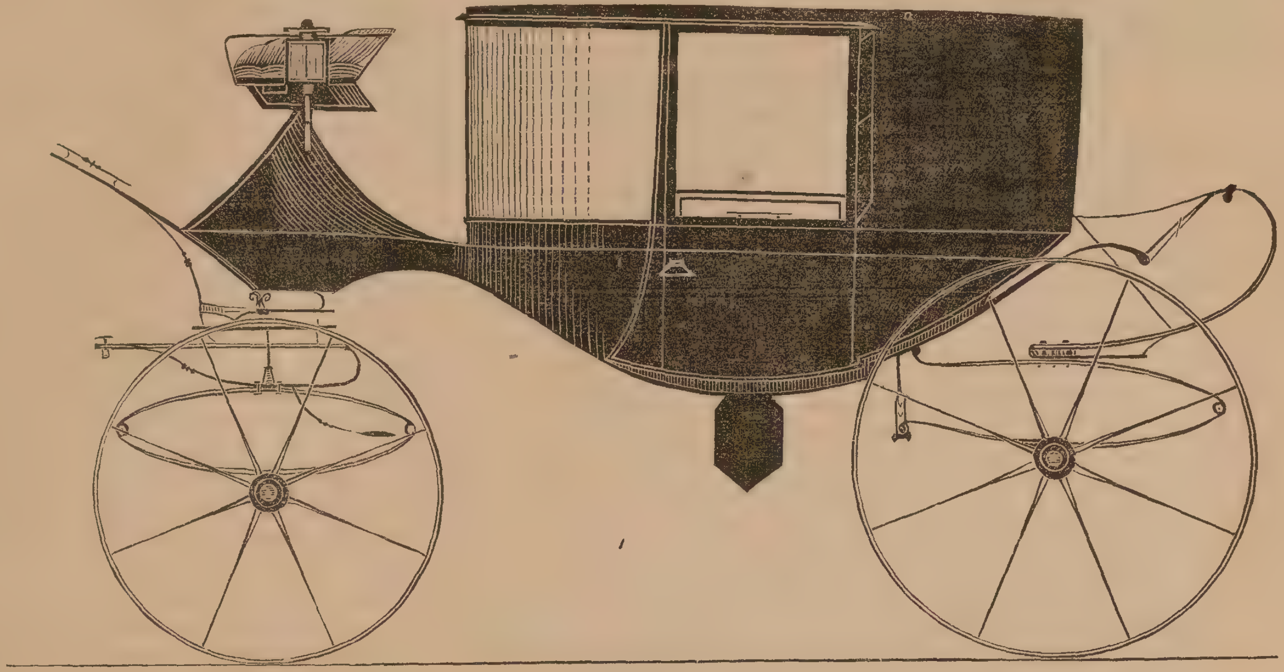
WATER COLORS.

In water colors, we give the entire list, Winsor & Newton's, which comes in whole and half cakes; or moist water colors, which retain, from processes and treatment known only to themselves, their solubility and dampness for an unlimited period, and a box of them, though laid aside for two or three years, will be found, when required again, equally moist and serviceable as when purchased.

Antwerp Blue.
Bistre.
Burnt Sienna.
Brown Pink.
Blue Black.
British Ink.
Brown Ochre.
Burnt Roman Ochre.
Burnt Umber.
Chrome Yellow, 1, 2 and 3.
Cologne Earth.
Dragon's Blood.
Emerald Green.
Gamboge.
Hooker's Green, No. 1.
Hooker's Green, No. 2.
Indigo.
Indian Red.
Italian Pink.
Ivory Black.
King's Yellow.
Lamp Black.
Light Red.
Neutral Tint.
Naples Yellow.
New Blue.
Olive Green.
Orpiment.
Prussian Blue.
Prussian Green.
Payne's Gray.
Raw Sienna,
Raw Umber.
Roman Ochre.
Red Lead.
Red Ochre.
Red Chalk.
Sap Green.
Terre Verte.
Vandyke Brown.
Venetian Red.
Vermilion.
Verditer.
Yellow Ochre.
Yellow Lake.
—
Sepia.
Warm Sepia.
Roman Sepia.
Brown Madder.
Constant White.
Chinese White.
Indian Yellow.
Crimson Lake.
Scarlet Lake.
Purple Lake.
Mars Brown.
Mars Yellow.
Scarlet Vermilion.
Chalon's Brown.
Black Lead.
—
Cobalt Blue.
—
Green Oxide of Chromium.
Lemon Yellow.
French Blue.
Pink Madder.
Rose Madder.
Intense Blue.
—
Mars Orange.
Pure Scarlet.
Burnt Carmine.
Smalt.
Purple Madder.
Ultramarine Ash.
Carmine.
Gallstone.
Cadmium Yellow.
Orange Vermilion.
—
Ultramarine.
Ditto, Quarter Cake.

PERMANENT CHINESE WHITE.

Prepared only by Winsor & Newton. The white oxide of zinc is pronounced by the highest chemical authorities to be one of the most unchangeable substances in nature. Neither impure air, nor the most powerful re-agents, affect



its whiteness. It is not injured by, nor does it injure any known pigments.

The great body it possesses gives it the property of drying on paper of the same tone as it appears when first laid on, and thus, when used, either alone or in compound tints, it does not deceive the artist, like other whites, by drying up three or four tones higher than when wet.

Having now given the brushes and the colors necessary, and supposing that the student has secured a careful pencil drawing on Bristol board, and marked his patterns so as to be able to place them to their exact position when required, and extended all lines beyond the outline of the draft, which he will, of necessity, have to cover up on laying on the ground colors; having, we say, fortified himself against any confusion of ideas that might arise, he is ready to make his first essay.

Provide yourself with a nest of porcelain saucers, in which to mix the colors, and begin by rubbing up either lamp or ivory black. The colors should be rubbed up with soft water, and then thinned with prepared gum water. (Every article we may mention can be purchased of any respectable dealer in artists' materials.)

The novice or new beginner should not apply color to the draft, until he has, by practice, on a separate piece of Bristol board, brought the color to the proper consistency. It is better to have a space laid off the same size as the draft, and having coated this, then attempt the draft in hand; begin at the front of roof rail, and pass right on to the upper back quarter, coating it also; but in going over any surface, do not attempt to make a clean outline with the brush. Run as close as possible, and afterward, with the pen filled with the color being used, apply the patterns and true up the edges. Next coat the boot, which extends from the coupe pillar to the toe board, paying no attention to the dividing line and lamp stem, where the latter projects on the boot. The first coating must cover, for in the attempt to apply the second, the first will wash up and ruin the drawing.

Before proceeding with panel colors, we would state that lamp black is not as intense in color as ivory black, and although working and covering better than ivory black, we would recommend the use of the latter.

We will now prepare the color for the lower quarters. We decide to use a dark rich brown, which we mix of Vandyke brown, heightened with burnt sienna, and a rich cast given it by adding a small quantity of carmine or lake. Have the saucer and brush perfectly clean, and having tested the color on a separate pattern of the panels, and obtained the proper temper, coat the panels, starting at the back quarter, and carry the color forward, covering that portion of the hind wheel which crosses the back panel, also the moulding lines on door, and the door handle.

Next in order is the belt. We propose to color it dark green. For this purpose, we will take Prussian blue and raw sienna or yellow ochre. Begin as before at the back end, and work forward, covering any crossing lines that may interpose, stopping the color at the extreme front.

The body is now ground colored, and before the moulding lines or anything else is reproduced the colors must remain two or three hours to dry. When dry, the moulding lines may be attempted. We will select Indian red. Fill the pen, and with the T-square, (using the swivel head,) strike the apparently horizontal and then the perpendicular lines, using *the patterns* for the *curved* lines. Next the door handle, brought out with liquid gold ink, representing Prince's Metal Mounting, which is to be used on other parts where mounting is generally placed. Follow now with the lamp, dickey seat and cushion, the lamp with liquid gold, dickey seat and cushion with black, delicately tinted; also, the toe board, rocker and book step black.

The circular front must be rounded by lines of black, as shown in the draft. On the body, where the appearance of a round is to be shown, use china white.

The carriage will next engage our attention. We select carmine. The pen should be used on the carriage in the same manner as directed in the November number for inking in; color being substituted for Indian ink. Strike the rims first, then the hubs, and where the hind rim runs on the back quarter, split the lines with china white; this carries the white ground of the paper over the dark color of the body. Complete the coloring in the following order:

Springs, front carriage, and lastly the spokes. The face of hubs liquid gold.

☞ Cayuga Lake Bending Works, Charles H. Adams, proprietor, does an extensive trade in Buggy Bows, employing about thirty men. See his advertisement, and give him a trial.

☞ Boxing and Tenoning Machines manufactured by Silver & Deming. Orders received at this office.

☞ Rubber Prop Blocks are better and as cheap as the old style. Try them. See advertisement.

For the Coach-Makers' International Journal.

REPLY TO PROGRESS ON WHEELS.

In JOURNAL No. 10, friend Progress wishes somebody and everybody to inform him "what the consequences would be if he should make his wheels quarter of an inch rim-bound, or the felloes quarter of an inch too long, and have the hooper draw them up with the tire." At the same time he intimates that he intends to victimize whoever answers him.

Now, I have been a victim to some things ever since I was born, and am getting so that I rather like it. In fact, I was born just at the wrong time, when our folks had eight others, all of them as mischievous and expensive as their patience and purse would allow. At the same time the old folks were somewhat at variance on religion, family government, &c., so that neither one cared to take any great interest in anything that the other had any claims upon. So you will perceive that I was a superfluity, and I expect that there would have been but very few tears shed if I had died in infancy. In fact, all the *old women* said I would die, "the poor, puny little darling, with eyes that he would never open;" but they *did* open, notwithstanding. Next followed the hooping-cough, chicken-pox and measles in quick succession. Notwithstanding all these afflictions, which I was destined to pass through, I am yet alive, and ready to be victimized again. So here goes for an answer to his question.

A hard, tough felloe would have a tendency to bend sideways, and work out from under the tire, unless bolted thick enough to prevent it from doing so, and I think that is hardly practicable. One that is not very hard, and rather porous, would be more likely to bilge at the spokes. Size and weight might vary the process some; but in any case I think that no good can come of making wheels rim-bound to any such amount as he speaks of.

Now I am fully aware that I do not know everything; but think I make about as good a victim as any one, and concluding from Progress' communication, that he wanted a few such before he proceeded with his arguments, I am very happy to subscribe myself,

VICTIM, AT HIS SERVICE.

HOOPING WHEELS.

(*Continued from page* 152.)

I supposed that the subject in question had been thoroughly discussed, and every inch of the ground traveled over, and did not intend to prolong my argument; but at this late hour after all that had been said, I find myself confronted by one who has taken an active part in this discussion, and, instead of meeting the subject squarely, he dodges back to ideas advanced three months ago—leaving the work he took hold of unfinished or unsettled.

If this is the way he enters into the wheel business, no wonder he admits the fact that he never can be competent. He says he has been "asking questions for eighteen years what so and so meant in the German, and was always put right on the question, and could always understand what was said to him."

Let us see how he understands. I said in No. 7, "that the experience I have had in putting up wheels was superior, perhaps, to most smiths." *Not wheelers, understand.* If that is the way he understands, he would be unable to define my exact position; yet he says, "judging from his (my) communications, one would infer he was a wheeler, and he would seem, to the inexperienced reader, as master of that particular branch of business; but when the scientific wheeler reads his theory, he would readily detect that it will require practice before he can make as good a wheel as a wheeler."

Now, I think this language is inconsistent, because of the qualifications I made at the time I referred to the proper method of putting up wheels, and yet he comes out indirectly, finding fault, fearing I know more then he does about his branch of trade, or that others might think so. Well, I begin to think so myself from his last communication, because if he was competent he would not take the ground he has taken without giving the whys and wherefores. His whole drift of argument is simply an expression of envy, because I presume to know something about making wheels, or how they should be made to receive the tire, and this, after he had read the qualifications above referred to, and while he is boasting of the power to understand what is said to him, I would ask what benefit the inexperienced workman would derive from such an article? Prejudice against those whose experience ought to enable them to know whereof they affirm would be the only result.

The efforts I have put forth in writing for the JOURNAL have been for the benefit of the JOURNAL and of its readers. The instructions I have given in hooping wheels, and also what I have said in reference to making or preparing the wheels for the tire, if carefully heeded, will insure success. I know it to be so. There is no guess work about it. The evidence I have is from long experience, and the perfect satisfaction of my employers. If my friend Spoke Shave will not think me boasting or presuming too much, I will state the language of my employers. They say "we have had wonderful success with our wheels for the last two or three years, and the secret lies in cutting out the felloes aright, and the manner of putting on the tire." The wheels being of the first order, and prepared under my own supervision, I will state again, for my friend's benefit, a few facts in regard to preparing wheels for the tire. We have a machine to put every wheel in, and screw them up tight and cut out the rim until every joint is tight in the wheel, leaving the joint a little open on the tread, and while the wheel is thus tight in the machine, trim the ends of the spokes just a trifle below the surface of the tread. All the reasons for so doing are explained in my former communications.

I have said nothing in regard to making wheels that I would not be willing to submit to any class of competent workmen, and whenever I have made any statement, I have given my reasons, and whenever I have thought proper to correct erroneous ideas I have endeavored to show why it was thus and so. I deny ever saying elm was more porous or coarser grained than any other timber; but I hold that the ends of the grains of red elm cannot be affected by the weather like that of any other timber; for while they are exposed to an equal amount of moisture, and the same temperature of weather that would cause the grain of birch or any other hub timber to soften, the grain of elm would yet be dry, sharp and stiff.

I will now answer a question by one who signed himself "PROGRESS." He wants to know "what would be the effect on a wheel should the rim be made a quarter of an inch longer than it will allow, in order for it to rest firmly on the shoulders, and then the smith, in setting the tire, to give it ⅜ draw, &c." I suppose my friend is aware that the above is rather an extravagant question, and, judging from the extravagance of the question, I should think it was for mere speculation, rather than for information; yet it is worth investigation, saying nothing of the unfairness of the question; and with such an undefined and vague question my friend must naturally expect a vague answer; still I will do the best I can under the circumstances. I would like to ask my friend what kind of a wheel he meant, but will suppose he meant somewhere between an ox cart wheel and a baby wagon. Take for example, then, a wheel for a BOSTON COACH. Supposing the rim to be of the first quality of timber, such as hickory, size 1½ by 1⅝ inches in depth, or 1½ by 1¾ inches in depth, the felloe left ⅛-inch open with no dish in the wheel, or so that by laying a straight edge across the face of the wheel, the spokes at the hub and the felloes will agree or touch the straight edge; allowing this, then, ⅜-inch would not be enough draft to give such a wheel, while at the same time, in running the tire while hot, after welding, would be a trifle too much for the good of the felloe; the timber being over-taxed would be detrimental to the durability of the wheel, though scarcely perceptible.

You will see, then, by the above example, by giving ⅜-inch draft in the tire on a felloe of the same quality and size, made ¼-inch longer than would allow it to rest on the shoulder of the spoke, would not injure or over-tax the timber; but if put to use equal with the wheel in the above example, would soon spoil it. In less than one week's steady running on pavements, the tenons would all be working in the felloe, and, of course, rim-bound, and the wheel almost spoiled at the same time; the felloe would not work from under the tire, as we would naturally suppose, after losing its support from the tenons of the spokes, in consequence of their wearing and working loose.

Now, upon the same principle, we will take a ⅞-inch felloe for a light buggy wheel made of the same kind of material and the same proportions in every respect, only light, as above-mentioned, then give the ⅜-inch draft, and it would tend to check the felloe at the spoke, and also bilge or wrinkle each side against the spoke, besides it would tend to squirm from under the tire, and would be a detriment to the wheel in general. I would like to say more, but must stop, as my friend Spoke Shave said, "I am behind time." I must drop the question for the present. H. D. F.

For the Coach-Makers' International Journal.

CINCINNATI, O., July, 1870.

MR. EDITOR:—When you visited our city, you mentioned the Wooster plan of hooping wheels, since which time I have been experimenting, more or less, and as "Progress," in the last number of the JOURNAL, asks the opinion of Spoke Shave, V. Ulcan, or any of your readers, I consider it not out of place to give a little of my experience, as probably most of your answers will condemn the plan. I made a discovery to-day in experimenting with the "long rims." I knocked off the tire from the odd wheel I experimented with when you visited our shop, and examined the rim and found the *extra* length had diminished from a full quarter to a scant eighth, showing the wood had permanently upset about 3-16 of an inch. Now, in measuring for re-setting again, I gave the solid draft of the tire only ¼-inch, which, when re-set, brought the dish the same again, viz: ½-inch.

I would say that we are trying it pretty thoroughly. We have tried it on some 20 sets of light and medium light wheels. To me there seems to be no objections to the plan, but am inclined to think it a decided improvement, because we get a tight tire without over-dishing the wheel. It requires the same judgment in regard to the amount of draft, over and above the extra length of rim, (depending somewhat on the wheel as it comes to the smith, whether straight or otherwise,) as it does with the old plan. If we discover no serious objection to the new way, we will continue to set all our tires on the "long rim" plan.

GEO. R. GROOT,
Supt. for J. W. Gosling.

For the Coach-Makers' International Journal.

WOOSTER, O.

MR. EDITOR:—V. Ulcan has given us a rule by which we should govern our draft. His rule might work with him, but it would never work in this country. I will give you the draft we use here in the woods. From ⅞ to 1-inch, ¼ tire, ⅜ draft; 1⅛ to 1¼ spoke with the same tread, ½-inch draft, which usually dishes our wheels from a quarter to ⅜ of an inch.

As we are on the subject, I would ask Mr. V. Ulcan what he would do with a set of wheels that were rim-bound, (as you would term it,) old wheels, the tire wanting re-setting.

PROGRESS.

THE ART OF COACH PAINTING.

(Continued from page 153.)

STYLES OF STRIPING, AND THE MIXTURE OF STRIPING COLORS.

The variety of styles in striping carriage work, are limited to a few in number, when we discard those which lessen rather than increase the beauty of the work. For a painter may spend two or three days in *hand* scrolling and striping a job, and after all his pains produce only a display of labor, without having added any real beauty.

In calling to mind the different patterns that have been and are being used, we notice, first, the fine line. In times past it was considered in bad taste to stripe a buggy or carriage with a heavy line, and to have *then* attempted to sell a job striped on both sides of spokes, felloes and other parts, would have laid the carriage-maker open to severe criticism. When the demand arose for a greater display, the fine line was enlivened by being dotted at the ends of each stripe, or in the middle, using the same color as that of the stripe, no striping being put on the sides of the spokes. We have had, since then, the following styles:

A fine line on each side and front of spokes.

A fine line dotted at ends, or in the middle of stripes.

A fine line dotted and finished at ends with fine scroll.

A fine line finished with large open scroll.

Two fine lines of the same color, running parallel to each other, representing a broad line edged.

Three fine lines, (triple stripe,) representing a broad line edged and centred with fine lines.

These prepared the way for broad lines on the spokes and other parts, giving us eventually, first, a single heavy line on the centre of spokes, felloes, hubs, &c., and calling out the genius of the painter in studying up variations, among which we notice the following:

A quarter or three-eighths broad line of a modest color.

The same, centred with a contrasting fine line.

The broad line, centred and striped on front edge.

Broad line, centred and striped on both edges.

Broad line, centred, and fine lines placed at a distance from the edge.

As these gradual changes took place in the quantity of striping run on, the desire arose for gaudy colors, and modest and retiring colors were in a great measure abandoned, ushering in straw, orange, red and crimson, and these were followed and accompanied with a perfect shower of gold leaf. The flash style still obtains in some sections of the country, it being a difficult matter to sell work plainly finished.

Broad lines having been introduced on the spokes and every other presenting face, front or back, over the gearing, the only change that could be made was in the manner of running the stripes.

1st. They were started at the hub, and carried to a convenient distance from the felloe, the ends squared by cutting them off with the ground color, and then followed

2d. Centering, edging and distance fine lines, all cut off an inch or so from the felloe.

3d. The same, except that the edging lines were connected across the end of broad stripe, as were the distance lines.

Then the stripes were carried from a point an inch or so distant from the hub to the same distance from felloe.

From hub to felloe, the entire length of spoke, then centred, edged and distanced.

Carmine glazed on vermilion was introduced, and had almost unbounded sway for a time. Half and half, as it was called, was short lived. This style consisted in striping one-half of each spoke, &c., with a color contrasting with the ground color.

The ground colors ranged from white through almost every mixture the fertile brain of the painter could invent, and often the puzzle was to select a suitable color with which to stripe a gearing.

Bodies were introduced with "bowls," "cut-under," or "wheel-houses," and paneled off so that different colors could be brought near each other. Striping both heavy and fine lines became fashionable, and on the bowls and cut-under a vast amount of labor was expended. During the late war, there appeared to be a frenzy for display, and the efforts of carriage architects and artists to keep pace with it well nigh exhausted their ability to produce anything new, handsome and striking.

The compounding of the colors used for striping during these years which witnessed such a variety, may not be uninteresting. We will begin with white, and endeavor to mention the greater number used. Broad lines of light color require two coats to cover well. We will commence with a

White, Broad Line, which was mixed of clear china, flake, zinc, or Cremnitz white. The last named possesses the purest tone.

Silver Color—White and a minute portion of drop or blue black.

French Gray—White and drop black.

Straw Color—White and chrome yellow, No. 2; white, chrome yellow and raw umber; white, chrome yellow and vermilion; white and yellow ochre; white and Oxford ochre.

Corn Color—White, yellow ochre and umber; white, yellow ochre, umber and a little black.

Light Buff—White and lemon chrome; white and yellow ochre.

Deep Buff—White, orange chrome and raw umber; white, lemon chrome and vermilion; white, chrome yellow, No. 2, and light red.

Cinnamon—White, yellow, light red and umber; burnt sienna, yellow and umber.

Canary Color—White and lemon chrome; poonah yellow glazed on white; white and drop ochre.

Cane Color—White, ochre, a little umber or black.

White being the principal ingredient in all of the light colors made use of, it will be readily noticed that a great variety of tints and shades may be produced by the quantity of any color that may be added. Therefore in compounding light colors, white should be first placed on the palette or stone, and the colors added in small quantities, until the required tint be produced; and it is likewise necessary to compare the tint with the ground work on which it is to be placed. If the ground color is dark, the tint will appear, in contrast, to part with some of its color, and must be strengthened.

White, mixed with the various pigments termed yellow, gives tints lighter or darker, according to the tone of the pigment employed. White and light chrome yellow, mixed and compared with white and medium, or deep chrome, present considerable difference; and when the darker yellows are made use of, the change is still greater. The same is true of other colors mixed with white. Zinc white produces softer tints than white lead.

Pink—White and vermilion; white and light red; white and Indian red; white and carmine, &c.

Flesh Color—White, vermilion and Naples yellow; white, Indian red and ochre.

Orange—Vermilion and lemon chrome; carmine and lemon chrome.

Drabs—White and raw umber; raw umber and yellow; white, raw umber and red; white, umber, yellow and black.

Blues—White and ultramarine blue; white and ultramarine blue, glazed with clear ultramarine; ultramarine blue, glazed over straw color; ultramarine blue, glazed over white.

Lilacs and Purples—White, vermilion and ultramarine blue; white, carmine and ultramarine blue; carmine and ultramarine blue.

Pea Green—White and chrome green; white and verdigris; white, blue and yellow.

Grass Greens—Chrome yellow and Prussian blue; chrome yellow, blue and black; chrome yellow, Prussian blue and Dutch pink.

Browns—Burnt sienna and yellow; burnt umber, yellow and vermilion; burnt umber, yellow and lake; burnt umber and orange chrome; burnt umber, yellow and Indian or light red; Vandyke brown, burnt sienna and yellow; drop black and Indian red; black and vermilion; black, vermilion and carmine. A great variety of shades may be had by varying the proportions of the colors named, and by the use of others not necessary to mention.

Reds—Clear English or Trieste vermilion; English vermilion and carmine; English vermilion, glazed with carmine; English vermilion, glazed with Munich lake; carmine, glazed on Indian red; carmine, glazed on dark brown; carmine and Indian red.

The foregoing list comprises the majority of the hues and shades made use of; while in the attempt to find something new, other colors were accidentally formed, the mixtures of which would puzzle the painter to mix again, were he called upon to do so.

Gold Leaf was very freely used, degenerating at length into bronze and paint imitations of gold leaf.

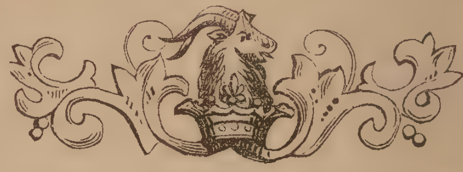
On all dark and medium grounds, the light contrasting colors, either as fine or coarse lines, were used; on light grounds, various shades darker than the ground color. Wherever fine colors, either for ground color or striping, were employed, the finished work was greatly admired; while imitations condemned the work on sight. At present in Philadelphia the work is comparatively plain; the striping colors are not "staring," but of olive, brown and other dark colors. At New York, where there is more display in every-day life throughout all its ramifications, carmine and other bright colors hold sway. In the West there is a great variety kept up, and transfer striping is very popular. Chas. Palm & Co. furnish scroll work and plain and ornamental stripes, designed to suit every part of a carriage. We have, then, no particular style this season, for carriage-makers and customers have been surfeited with flashy colors, and a previously dull trade has toned down expensive painting.

In the proper selection of striping colors, it would be well to remember the effect produced by the mixture of their complementaries. The eye, when directed at a color, is, after a few seconds, excited to see a faint image of another color. Green will call up red, and red green. Blue will excite the eye to see orange, and orange blue. If, then, you should place green and blue side by side, a confused effect would be produced. It would be similar to mixing green, red, blue and orange on the palette, which will at once convince the painter that a poor color would be the result. Red and blue, or green and blue are less pleasing than red and green, blue and orange. Red and blue, and green and blue should be separated by white. Yellow, orange, blue and violet associate well with black, while green would give to the black a rusty appearance, on account of the eye being excited to see red.

The painter should experiment with different colors, and keep a memorandum of the mixture of those which associate the best, and keep samples of every job he finishes. These will also be of value in assisting a customer in selecting, and in speedily settling any objections he may make when his carriage is finished.

In conclusion we would remark, the purity of striping colors depends greatly on the color of the liquids with which they are mixed. Dark brown japan should be seldom, if ever, used. Varnish; varnish, oil, and japan gold size; oil and sugar of lead; boiled oil; raw oil, and red lead simmered over a gentle fire for an hour or two, and any other light colored mixture. Carmine and lakes requiring a more powerful dryer than any other colors.

ORNAMENTS.—This pattern is suited to narrow belt spaces, or to panels having a greater width than depth. The design is plain, and easy of execution. Lay in the crown gold, and also the edges of scrolls where the high light falls. After the gold leaf has been applied, proceed with the colors, selecting those which will agree well with the ground color. In handling these small patterns, they may be dismissed with a few carefully given touches, by merely representing the leafing by outlines, mixed of a hue to suit the lighted and shaded portions, and placing each hue or tint in its proper place at once, leaving the ground color to supply the rest. But where depth and richness of colors are sought, repeated coatings and glazing must be resorted to.



The middle portion of the ornament will require the exercise of more skill than the scroll work, but being small, defects will not be readily discovered.

The goat head and neck may be painted true to nature, representing any one of the varied kinds to be found, or may be somewhat exaggerated in color, if it suits the purpose of the painter in giving a certain effect.

On dark grounds, select the gray and delicate brownish tints. On light grounds, those that are dark.

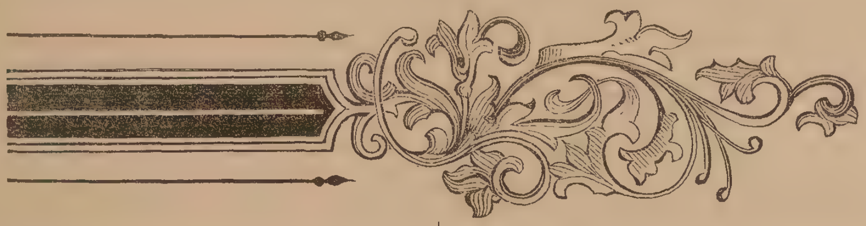
Having a distinct outline, place the half lights in their proper position, and with a short-haired pencil work the color off toward the shaded parts, the ground color being allowed to form the darkest part. The whole having been coated, with reference only to forming the head and neck, work up the details by colors, lighter or darker, according to demands of the pattern.

The crown may be shaded with asphaltum, tinted with carmine, and lighted with straw color or pink, (light red and white.) The dots or small circles may be painted in imitation of the ruby or emerald.

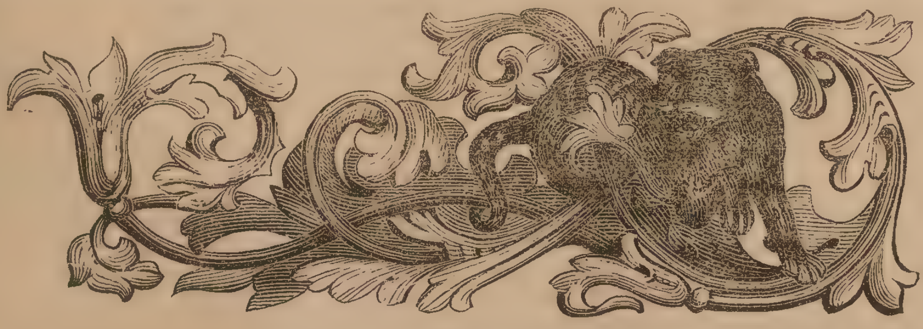
ORNAMENTED BROAD LINE FOR SLEIGHS.—As it is our custom to give styles of sleighs thus early in the season, we herewith present a design for broad stripe, suitable to the Portland or other styles.

The scroll end may be used as a finish at end of stripe, as here shown, or placed as a centre ornament to the stripe by running the broad line on each side.

A slight alteration would be required at the outer end of the scroll to make it fit the stripe. The fine line inclosing the broad stripe being connected with the scrolls should be of the same color. Scroll and stripes, gold. Broad line any dark color suited to the ground color, and the distance fine lines also of a color dark enough to enhance the brilliancy of the gold leaf. On light drab, straw, flesh color, pea green, or any other very light ground color, if gold leaf is employed, it should be back-shaded to relieve it from the brilliancy of the color on which it is placed. The pattern may be drawn to suit any curve desired by taking the sweep of the same as a centre line, and on this line re-draw the pattern.



SCROLL PATTERN.—This design will furnish good practice. The tiger in his ferocious aspect will call into play that quality of skill which every ornamenter desires to possess. The body and limbs of the beast may be more easily pictured than the savage face. The glaring eyes and cruel mouth are the principal features to be studied, yet the other parts of the visage must not be handled carelessly. Notice that the nostrils are slightly upturned, and the eyes dilated. This savage countenance in repose would not present so hideous an appearance, for the fascial muscles would be at rest. No exciting cause being present, either of hunger or the approach of an enemy, there would be a more kindly expression. The eyes would be partially covered by the eyelids, the nose and nostrils extended, and the mouth closed. The coloring may be done in different shades of gray, (black and white,) using umber, black and ochre in producing the different shades required in delineating the stripes, and markings and shadows.



On a correct outline, lay in the shades and the subdued lights; blend them sufficiently to remove a patched appearance, and, when dry, give expression to the eyes. Bring out the nostrils with decided dark touches, and paint the mouth and tongue, leaving the teeth till the last. The tongue should not be colored with a bright red, as we have noticed is the practice of some ornamenters, but should be darkened, using Venetian red and black. Toward the roots of the tongue the color should grow darker, as the cavity of the throat shadows that portion.

The teeth, if painted clear white, will look unnatural. Use white and ochre; or black, and light with white. The lights which give a fierce expression to the eyes, should be of a yellowish cast, rather than clear white.

Relieve the head by a dark shadow falling from it on the body; the outline of the face on the shaded side to be relieved from the body by a dark gray, or ochre-colored tint. Paint shadows thinly. Lights with a good body of color.

Having finished the tiger, proceed with the surrounding and connecting scrolls. The colors used may be tan color, red-browns, red-browns deepened with lake and black, dark green, &c., as fancy may dictate.

Have a pencil for each color, keeping the lighted parts pure in tone; and as the shaded portions are approached, sadden the colors, and at last abandon them for neutral tints. Sharpen up the lighted portions with decided touches of high light, and the retiring parts with tints less obtrusive, and scrumble or glaze where a retiring effect is desired.

WINCHESTER, VA., June, 1870.

MR. EDITOR:—Would you be kind enough to let me know what kind of japan or paint is best to finish off irons on a body, showing a handsome finish? Also, what is your opinion of "Piotrowski's Permanent Wood Filling" for new work and repairs on both bodies and gearings, and what are the directions for its use?

C. McV.

ANSWER.—The irons on a body should be primed, leaded, puttied, and have one coat of filling or rough stuff; then sand-papered, colored and varnished the same as the body. If it is your custom to remove the body loops when the job comes from the smith shop, finish them except the last coat of varnish; rub them down and put them on the body before it is ready for the finishing coat; touch up the nuts and bare places, and finish when you do the body, with English or American wearing body varnish. English or American black japan may be used instead of color and varnish, as they produce a more intense black, but they will not answer for finishing on good work.—black japan possessing poor wearing qualities when not protected by wearing varnish.

On cheap work the irons may be speedily finished, by giving them a coat of lamp-black color and varnish as soon as they come from the smith shop, and finish with a heavy coat of *old* drop black, color and varnish. Irons will not show a handsome finish unless they are filled up well, and have two or three coats of varnish.

In painting either wood or iron, the process is a tedious one where first-class work is sought, and whenever the work is slighted of its proper amount of labor and stock, or handled by careless or inexperienced workmen, the result will inevitably be poor or mussy work. If there is any part of a carriage which the painter should pride himself on, it is that the irons show a finish equal to the other parts. In our largest and best managed shops, men are employed who pay special attention to the irons, and when a body is hung off, and the irons all screwed up to their places, the finisher cleans every nut that requires it, leads, blacks, and color and varnishes, and finally coats them with wearing body or gear varnish. As we have before stated in the painting department, those parts of the body loops, or other irons which require handling, should not be finished until they have been securely fastened in their respective places.

ANSWER TO QUESTION SECOND.—Our opinion of the "Permanent Wood Filling" is, that when it is used in strict accordance with the directions given, it fulfills, in a great measure, what is claimed for it. As a priming we consider it superior to lead, in that it possesses a viscidity, not inherent in oil lead. The reports of its workings, by Messrs. Valentine & Co., through their paper, "*The Hub*," are very frankly given.

They report that the majority of persons who have tested it speak in its praise, although at first many raised serious objections. In our visitations throughout the country we find a goodly number of shops using it, while others condemn it. Its name damaged its reputation to some extent, painters having taken up the idea that the "Permanent Wood Filling" was a something that filled the wood completely, doing away with the use of lead and rough stuff; and when they, by experience, found that such was not its intent, it was cast aside as worthless.

Is has been greatly improved since it was first put on the market, in being made to dry quicker, and we think that for summer use it should be tempered to set more firmly, to prevent it sweating out.

Directions for its use.—Bodies of carriages dispensing with lead, but using rough stuff. When the body is received from the woodshop, rub with lump pumice, (should the panels not be smooth,) dust off, and apply *a very thin and even coat* of "Permanent Wood Filling," dark or light shade, according to the work. Allow this to dry two or three days, then apply a coat of rough stuff, made elastic with oil, varnish and japan gold size, used in equal parts. When dry, putty up where needed, and when the putty dries add one or two coats of ordinary hard rough stuff, and rub down, when dry, in the usual way; over this color and varnish, as in the old method of lead painting.

Another is to dispense with the use of both lead and rough stuff, by putting on two coats of the "Permanent Wood Filling," then a coat of elastic color; putty on this, and when dry finish as under the old method.

GEARINGS.—Sandpaper smooth, dust off, and apply *a very thin and even coat* of the "Filling" to the wood parts; when dry, sandpaper smooth, dust off, and apply *a very thin coat* of "Filling" over all, wood work and iron; when dry, putty up, and when putty dries sandpaper lightly, to remove dust and runs; then dust off, apply an elastic coat of color, ground in oil and varnish, (no dead colors should be used on gears,) and finish in the usual way. One coat of the "Filling" on the springs and iron work is sufficient, and it should be as thin as possible.

FOR REPAIR WORK.—The parts renewed may be finished as quickly as by the lead method, and will wear better.

No. 5.

METHOD IN THE TRIMMING SHOP.

There is one thing which strikes the eye of every visitor to a trimming shop, and that is the utter want of neatness, I might say cleanliness, of the surroundings, (or at least this is true of a great many of them,) which astonishes the non-professional casual visitor, who is led to suppose that the place where such cleanly work is done, must, of a necessity, be the very perfection of neatness itself, and the workman the personification of the same; but what a change "comes o'er the spirit of his dream," on his first visit to a great number of the dens where the craft have to spend the better part of their lives, and to labor from "early morn to dewy eve."

As the visitor enters the door, the chances are he will tumble over a pile of bows, rails or steps, or wade in up to his knees in leather scraps, or flop in up to his ankles in the paste pot, or be compelled to climb over a mountain of shop sweepings, which had accumulated during three months or more; and if he successfully forces his way through all those objectionable features, he will most probably be treated to a sight of a workbench, compared to which chaos itself would be a relief; and then under that bench, there's where the glory of a slouchy trimmer mostly asserts itself. It is well stocked with everything, from sides of harness leather, to the scraps of bread and meat left from lunch or dinner time, and from half used up papers of tacks to half a cart load (small cart) of rats or mice, who make it convenient to breed there, and raise large families in undisturbed possession, and in convenient proximity to the aforesaid supply of grub-time shavings. And then the workman himself, the ruling deity, the first principal, the director general of this region of dirt and disorder, is usually in keeping with the rest of the landscape, who, if he shaved himself once in a week or two, and *disguised* himself in a clean shirt once a week, thought he was doing all that the law or society could expect of him; and who, if his work and workshop was not clean, had his mind made up that it was not his fault, for he had done his share.

This picture may possibly be just a little overdrawn, but yet, do not you and I, my readers, often see it very nearly realized? Happily, the great mass of our craft have too much self-respect to allow any one the chance of classifying them under the head of *slouchy*, but, on the other hand, too often do we see the picture as I have described it, "bating not a jot."

And now let me ask, what is the necessity for allowing any trimming shop to look like a Water street junk shop, or a Noah's ark, with a little of everything laying around "kind of promiskus?" Why, my idea of a trimming shop is, that it should be the very pink of order and neatness, "a place for everything and everything in its place," and any man who works in cloth and silks and fine laces, ought to be ashamed to let any one, professional or otherwise, see his immediate surroundings other than in unison with his work.

On the other hand, a man is very often discouraged and gets to be neglectful by reason of the boss he works for, and of the place in which he is required to do his work. Some employers seem to be possessed with the idea that any old hole or corner will do for the trimming shop, the darkest, most out-of-the-way place is considered good enough, and then these same employers will be the first to grumble, if the work is not all O. K. and neat looking, as if it was done in a clear, airy, healthful room.

A little of my experience in this matter may not be amiss here. A few years ago, the shop I worked in was situated on the bank of a rapid running stream, and close to the water's edge; one night a freshet reached our location, and when I went to work next morning, I had nary shop. I suppose there was a fine opportunity for some ambitious man to start business lower down stream. Well, I had to go to the city for work, temporarily, and it being late in the fall, I was not over particular where I got a job, or at what price I worked, and it was well for me that such was the case, for the shebang where I lit on was a *stunner;* the trimming shop was directly over the forge, and the floor was so open that I was in danger of getting my feet tangled in the cracks. There was an ever open trap at the entrance of my den, and every time that fresh coal was put on the fire by the V. Ulcans down below, I had to run and get my head out of the window to avoid being suffocated with smoke; then I had to go and "spread eagle" myself over the rusty, one-legged stove, to keep myself from freezing to death; and I remember well one day, when I undertook to clean up and set the "house in order," how the boss came up and stormed at me for wasting my time "fooling around in that way," and then he would occasionally "wonder why that cloth looked so dirty, or why that patent leather always looked so dull. He believed the leather dealer was in the habit of selling him inferior goods, or else the trimmers were careless and did not keep their work clean," when Hercules' little job of cleaning out the Augean stable might be a summer holiday, compared to being compelled to do clean work in such a place.

Now, my idea is, that in the first place a boss should understand that the trimming shop ought to be situated in a good, clean, cheerful and healthy part of the shop; for the business is sedentary, and if you increase your reasons for making your trimmers feel dull, dispirited and uncomfortable, I tell you plainly you will lose by the operation, and every trimmer who reads this will agree with me, that he can do more and better work where he has a well appointed trimming shop, than he can (try he never so hard) under the discouraging circumstances of an unsuitable location.

Then, on the other hand, I claim that it is the duty of every man who works at our branch, to have his shop, his bench, his tools and his person in keeping with the trade he works at.

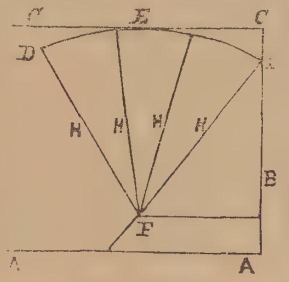
Now understand, my brother trimmers, I do not intend this lecture or homily should be considered as offensive to any one, but I claim the right to point out the errors in the ways of some of our friends, that they may be led to try and do better.

PATENT STEEL TUBULAR BOW SOCKETS

In the April number of the JOURNAL, we called attention to this new and valuable improvement, and subsequently, Messrs. Topliff & Ely, Elyria, Ohio, patentees, through their advertisement, referred to some thirty-eight firms that had ordered and used them.

T. Acks, editor of our Trimming Department, in the July number gave his experience in the use of the "Bow Sockets," stating certain objections, but said that "on the whole he liked them." We considered T. Acks' article of value, in that it pointed out improvements on an article already very popular. In the subjoined directions, furnished by Messrs. Topliff & Ely, a plan is given for setting the "Tubular Bows" by draft:

First prepare a draft board large enough to represent a full size top. Draw the horizontal line *A* near the bottom, which represents the bottom of the seat, then draw *B* perpendicular to *A* 3 feet 9 inches long, or the height desired for the top, then draw *C* parallel to *A*, 40 inches for the depth of the top or longer if greater depth is wanted, then mark the points *D D* as much below the ends of the line *C* as the top is to round. Now through the points *D D* and *E*, the middle of the line *C*, describe the arc *D E D* and space it off to correspond with the number of bows to be used. To find the point *F*, measure on the body of the buggy to be trimmed the distance from the bottom of the seat to the centre of the pivot on which the Bow Sockets are to fasten. This will be the distance above the line *A*; then to the distance of the pivot from the back of the seat add three or four inches, or as much as it is desired the top should extend over the back of the seat, and this will be the distance of *F* from the line *B*. Now draw the lines *H H H H* from F to the points marked on the arc *D E D*, which completes the draft. This draft can be used for other buggies by simply changing the point *F* as may be necessary.



To make the top by the draft, place the Bow Sockets on the lines *H H H H* with the eye-hole at *F*, then place a straight edge on the top of one of the bows, measure down the bow from the straight edge on each side a distance equal to the distance from the top of the first Bow Socket to *D* on the arc *D E D*, and mark it, then from this mark measure the length you wish to have the bow run into the socket where the bow is to be cut off. Mark each bow in succession in this way, numbering them for the sockets they correspond with. The bows can run into the sockets from one to two feet as is most convenient. It is better that the back bow should run below the point where it strikes the prop when the top is down, and the front bow should run below the points for the knobs; a foot is sufficient for the centre bows.

After the bows are sawed off proper length, run a groove along the middle of the inside of the bow corresponding with the bead on the inside of the Bow Sockets. Then make the bows a true taper, so that they will go in easily to within half an inch of the mark, and then drive them into the mark.

It takes an hour to set a top and fit bows in this way, while it takes at least half a day to round the bows and set a top by the old method.

MR. EDITOR:—Seeing in your July JOURNAL an "Experience with Steel Tubular Bow Sockets," I take the liberty to give you mine. I have used the Sockets seven months; in fact, since I first saw them; have used no other bow, and have not had one fail in any way, although the first I had were far inferior to those I am now getting, as they were soldered after putting in some kind of acid, which I think may cause them to rust inside, and the solder did not leave them as smooth or as strong as the lock or seam, which they now have.

Our July friend thinks them "liable to indent where the back bow falls on the prop iron." I think he can obviate this difficulty by using "Barnett's Rubber Proof Block," (which, by the way, are a great improvement,) and in fitting his bows carefully in the sockets, letting them extend down 20 inches or below where they fall on the prop iron. Perhaps the "glue" would be a good thing, but will make it a little heavier, which is an objection and not necessary, if they do not dent without. I have tested the strength of the socket in several ways, comparing them with the old bow, and have found them to stand double the weight in the centre, with both suspended at the ends. I have had more trouble with bows breaking than any other part of my work. A physician told me he had paid in a year and a half $22 for repairing broken bows in one top. I put a set of "sockets" on his old bows, which I find to be easily done.

There are, as our "friend" says, some difficulties at first in trimming with the sockets, but with patience and a sharp punch, these are soon got over. It takes a little longer to put on the props (I use Thomas') and knobs; but, after getting used to them, I think I save, on a top, all things considered, not less than six hours—one hour in rounding up the bows, and five in stitching, which I have always done by hand. Our friend says the only advantage is in lightness and strength. I think there is quite an advantage in the finish of the sockets.

W. B. C.

UNITED STATES BUSINESS DIRECTORY.

MANUFACTURERS AND DEALERS IN COACH AND CARRIAGE GOODS.

☞ Names will be inserted under any of the following headings, for Volume VI, at ONE DOLLAR each name. Those marked with an asterisk see advertisement in the Journal.

Axle Gauges.

HARPER, HENRY, (Harper's Patent,) Butler, Ill.

Axle Manufacturers.

*ATWATER, H., Agent. 1625 Market st., Phila.
*BRINTON, R. M. & CO., 219 Levant street, Phila., Pa.
COOK, R. & SON, Winsted, Conn.

Brush Manufacturers.

*THUM, CHARLES D., 150 North Third street, Phila.

Carriage Body Manufacturers.

EVANS, C., 59 Rosette street, New Haven, Conn.
NORCROSS, H. S., (light,) 1712 Coates street, Phila., Pa.
SHEW, LEVI W., 127 Park street, New Haven, Conn.
TOWNSEND, C. T., 116 Dixwell av., New Haven, Conn.

Carriage Bolt Manufacturers.

*COLEMAN, M. J., 2030 Arch Street, Phila.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDON, A. & M., 22d street, above Vine, Phila., Pa.
*SCOTT & DAY, 38 North Third street, Phila., Pa.
SHIELDS, WM., 23d street, above Race, Phila., Pa.
*SKELLEY, T., 24th st., below Callowhill, Phila., Pa.
TOWNSEND & HUBBARD, 2305 Cherry st., Phila., Pa.

Carriage Castings.

*FITZGERALD & FLAGG, 218 N. Third st., Phila., Pa.

Carriage Wheels.

BROWN, S. N. & CO., Dayton, O.
LA FARGE, I & J., Rahway, New Jersey.
*WOODBURN, SMITH & CO., 2d & Green, St. Louis.

Coach Hardware and Trimmings.

*ATWATER, H., 1625 Market st., Phila.
FORD, J. M. & CO., 48 North Third st., Phila., Pa.
*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
HIGH, J. J. & L., 156 Grand street, Rahway, N. J.
KEIM, GEO. DeB., 162 North Third street, Phila., Pa.
KENNEDY & CO., 305 Arch street, Phila., Pa.
*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
THOMAS & HOUGH, Harrisburg, Pa.

Fifth Wheel Manufacturers.

HAYDEN LETCHWORTH, Auburn, N. Y.

Hubs, Spokes and Felloes.

*MACKENZIE BROS., 222 Baltimore st., Baltimore, Md.
*SCOTT & DAY, 38 North Third street, Phila.
*WOODBURN, SMITH & CO., 2d and Green, St. Louis.

Iron Merchants and Manufacturers.

*ATWATER, H., 1625 Market st., Phila.
*GARRETT, KENT CO., Shipley st., Wilmington, Del.

Ivory and Horn Turners.

*ATWATER, H., Agent, 1625 Market st., Phila.
HACKERT & CO., 99, 101 and 103 E. Houston st., N. Y.

Paint and Varnish Brushes.

*FELTON, RAU & SIBLEY, 136 North 4th st., Phila.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*THUM, CHAS. D., 150 North Third street, Phila.

Permanent Wood Filling.

*VALENTINE & CO., Boston, Mass.
*ROUSE, J. G. & CO., 4th & Arch sts., Phila.
*SCOTT & DAY, 38 North Third street, Phila.
SNYDER, W. & A. J., 115 North Third st., Phila.
STOTESBURY, J, M., 56 North Third street, Phila.

Carriage Draftsmen.

*MULLER, A., 49½ First street, New York City.
*WERTSCH, G. & CO., 121 Avenue A, New York.

Coachmakers' Tools.

WEIR, JAMES, S. W. cor. 2d & Girard av., Phila., Pa.

Coach Lamps.

*CAREY & POST, 234 Carter st., Phila., Pa.
*NIXON & WIGLEY, 39 North Seventh street, Phila.

Felloe, Spoke and Shaft Manufacturers.

*GARRETT, KENT & CO., Shipley st., Wilmington, Del.
*HOOPES BROS. & DARLINGTON, West Chester, Pa.

Rubber Enameled Carriage Cloth.

*ODORLESS RUBBER CO., 19 Park place, N. Y. City.

Paints, Oils and Varnish.

*FELTON, RAU & SIBLEY, 136 N. 4th street, Phila.
LUCAS, JOHN & CO., 141 North Fourth street, Phila.
PHILA. PAINT MANUF'T CO., 1138 Market st., Pa.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
SHOEMAKER, R. & CO., N. E. cor. 4th & Race sts., Phila

Sleigh Bendings.

OLMSTEAD & JONES, Syracuse, N. Y.

Spoke and Felloe Manufacturers.

*CROWELL, DAVID, Wood Works, Rahway, N. J.
*HOOPES BROS. & DARLINGTON, West Chester Pa.

Spring Manufacturers.

*ATWATER, H., Agent, 1625 Market st., Phila.
*GARRETT, KENT & CO,, (Agents,) Wilmington, Del.
HAYDEN & LETCHWORTH, Auburn, N. Y.
*ROWLAND, W. & H., 948 Beach st., Phila., Pa.
*SHOEMAKER, M., 1439 Hutchinson st., Phila., Pa.

Tire and Sleigh Steel.

*ROWLAND, W. & H., 948 Beach st., Phila., Pa.

Transfer Carriage Ornaments.

*ATKINSON, W. & CO., 1270 Broadway, New York.
*JANENTZKY & CO., 112 South Eighth st., Phila., Pa.

Varnish Manufacturers.

*COLGATE & CO., 401 Illinois street, Chicago, Ill.
*FELTON, RAU & SIBLEY, 136 N. Fourth st., Phila.
*GARRETT, KENT & CO., Wilmington. (Harland's.)
KEYSTONE VAR. & JAP. WORKS, 313 Race st., Phila.
*MINETT & CO., 60 Pearl st., N. Y., & 16 N 12th st., Phila.
PARKER & GILLESPIE, 226 Pearl st., New York City.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*SMITH, EDWARD & CO., 161 William street, N. Y.
*VALENTINE & CO., Boston, Mass.

CASH

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, July 20, 1870.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
" snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.: No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.
Forged, Philadelphia List price, per doz.: No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
" Short, solid collar, per sett, ⅞ and 1 in., $3.25; 1⅛, $3.75; 1¼, $4.50; 1⅜, $5.50; 1½, $7.

Axles, Carswell's Wilmington, or Brinton's Phila. C. H. Short, plain taper, ⅞ and 1 in., $4.00; 1⅛, $4.50; 1¼, $5.50; 1⅜, $7.25; 1½, $9.25.
" Improved taper, ⅞ and 1 in., $4.50; 1⅛, $5; 1¼, $6.25; 1⅜, $8; 1½, $10.
" Half pat., ⅞ and 1 inch, $5; 1⅛, $5.75; 1¼, $7.25; 1⅜, $9; 1½, $11.

Axles, Long half pat., ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $8.75; 1⅜, $10.75; 1½, $13.50.
" Plain long taper, ⅞ and 1 in., $5.00; 1⅛, $6.00; 1¼, $7.50; 1⅜, $9.25; 1½, $12.

Axles, Improved taper, long, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10; 1½, $12.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 45 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.25.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.

Buckram, per yard, 15 to 18c.

Carpet, per yard, Brussels, $1.50; Velvet, $2.30 to $2.50. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $1.75; Fast Colored Zephyrs $1.50; Browns, same price.
" body, per yard, indigo wool-dyed, $2.50 to $3.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.00 to $1.38 per dozen.

Damask, German cotton, double width, per piece 30 yds., $15.00; do., Union, $28; English worsted, from $1.50 to $2 per yd; Rattinet, 50c. to 70c. per yd.

Dashes, buggy, per dozen, rough, $18; silver plated, $27. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.15 to $1.75.

Enameled cloth, per yard, muslin, 5-4, 30c.; 6-4, 45c.; drilling, 5-4, 42c.; 48 inch, 45c.; 6-4, [illegible]c.; duck, 5-4, 55c.; 50 inch, 58c.; 6-4, [illegible]; pat. tan back muslin, 5-4, [illegible]; [illegible] drill, 5-4, 55c.; 48 inch, [illegible]; duck drill, 48 inch, [illegible]; [illegible] muslin, 80c.; vul. rubber drill, hea., $1.30; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 13c.

Fifth wheels, Cincinnati pat., per doz., ⅝, $14; ¾, $15; N. York pat., ⅝, $11; ¾, $12.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Jump-seat irons, Mellenger's patent, single seat, 10 inch, $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.

Knobs, per gross, common jap [illegible]
English, $1.50; silver [illegible]
do., Engli[illegible]
" Button-holes, [illegible] new article: for quickness and simplicity of application it has no equal Price, per gross, $3.[illegible]

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2[illegible] inch, 25c. to 40c.; silk brocha, 2¾ inch, 75c. [illegible] 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; sil[illegible] barred, 12½c.

Lamps, per pair, fine, $15 to $30.

Leather, per ft., dash, No. 1, 13c.; do., No. 2, 11c; railing [illegible] 22c. and collar, 22 cents; enameled top, No. [illegible] 23c.; do., No. 2, 20c.; enam. trimming, 2[illegible]c.

Loops, fine japanned, metal pockets, for curtain stra[illegible] ends. A recent impr[illegible] great approbation, and will supersede anythin[illegible] of the kind heretofore used. Sold at $3.50 per g[illegible]

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c[illegible] lead, door, per lb., 20c.; cane, dressed, p[illegible] M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; [illegible]

Machines, [illegible]
ex. jaws, [illegible]
" spoke ten. machine, each, sm., $15; large, $[illegible]
" bolt cutting machine, each sm., No. 1, $12.[illegible] No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. [illegible] cuts ¼ to ¾ inch, $30; No. 2, cuts ¾ to 1 in[illegible] $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en[illegible]

Nails [illegible]

Ornaments, [illegible]

Sand paper, flint, per ream, best, 0 to 2, $4.50; 2½ to [illegible]

Screws, Eagle, gimlet point, wood, 40 per cent. discoun[illegible] from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.[illegible] No. 2, 3½ in., $7.50; No. 3, 4½ in., [illegible] No. 4, 5½ in., $11.
" improved No. 0, $5.50; No. 1, 3½ inch, [illegible] No. 2, 4½ in., $7.50; No. 3, 6 in., $1[illegible] 4, 10 in., [illegible]

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, [illegible] in., $4.25; No. 1½, 3 inch, $5; No. 2, 4[illegible] $7; No. 3, 5½ in., $8.
" Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 [illegible] $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, p[illegible] black, $8.55; do., Bright, $10.12; [illegible] 2, plain black, $7.88; do., Bright, [illegible] New York, pattern black, $10.5[illegible] Bright, $12.38; Baltimore pattern [illegible]
" W[illegible] 1 in., $13.25; 1⅛ inch [illegible]

Shaft couplings, Savage's, No. 1 plain black, [illegible] bright, $10.12; No. 2 plain black, [illegible] do., bright, $9.45.
" Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $1.50.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., [illegible] ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, [illegible]

Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, [illegible] 1⅛, $2.50; [illegible]
" [illegible] $[illegible] 1 in., $[illegible]
" close pla., ex. hea., plain, ⅞, $8; 1 in[illegible]

Sockets, pole, silvered, per dozen, plain, 1¼ inch, [illegible] 1⅜, $3.85; 1½, $4.30.
" [illegible]
" [illegible] ⅞, $6.
" Warburton & Bendir's Scro[illegible] turers' prices, 25 to 45 per [illegible]

Slat irons, wrought, [illegible]

Slat irons, wrought, N. Y. pat., per doz. [illegible]
" Bidwell's pat., 4 bows, per sett, rough, [illegible] 50c.; 1 long iron, 56c.
" plated, short, $1.20; 1 long iron, $1.37
" japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and [illegible] black, 14c.; Bright, 15c.; 1¼ inch, 1c. [illegible] more.
" Rowland's bright cast steel, 1¼, 3 and 4 [illegible] not shorter than 33 inch, 22c.; 1½, 3, 4 [illegible] plates, not shorter than 33 inch, 21c.; s[illegible] than 33 inch, per lb. extra, 3c.
" Bright oil-tempered, per lb., 1¼ inch, 1[illegible] inch, 17c.
" Spring Perch Co.'s, tempered, 28c. to 30[illegible] Bridgeport and Tomlinson Spring Co.'s [illegible] same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.[illegible] $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-[illegible] ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; sk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorn, per doz., $1.38.

Top holders, Thomas patent, buggy, $5 each; extension, $7 each.

Top props, silvered, per sett, common, 31c.; ext[illegible] to 80c.; Thomas' patent, mall., with plated nts and rivets, $1.25; Thomas' wrought with plated nts and rivets, $1.35.

[illegible] Thread, pat. linen, Stuart's, per [illegible] No. 25, $1.25; No. [illegible] $1.45; No. 35, $1.[illegible]
[illegible] H. B., per lb., No. [illegible] to 52c.; No. 3, $1.00 to $1.10; No. 12, $1.30.
[illegible] blue, per lb., No. 10, [illegible]; No. 3, $1.[illegible]; No. [illegible]
[illegible] Shrewsbury, black, No. [illegible] No. [illegible] $[illegible]; white and black same price.

Thread, machine, Barbour's, fancy colors, No. [illegible] No. 532, $3.30; No. [illegible] $4.[illegible]; white, 40c. per lb. extra.

[illegible] machine, Barbour's, on spools, fancy colors, No. [illegible]

[illegible] mattress, [illegible]

[illegible] No. B, $[illegible]; No. C, $3.75.

[illegible]ckets, improved, all black, per dozen, $1.[illegible]; black, silver top, $1.75.

[illegible]ckets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

[illegible]ket fasteners, [illegible] per dozen pairs.

[illegible]

[illegible] piece each, finished, $[illegible]
[illegible] finished, hickory, buggy, [illegible] per sett.

PAINTS AND VARNISHES.

[illegible]RECTED BY FELTON, RAU & SIBLEY, 136, 138 and 140 North F[illegible]

[illegible]ishing body, extra [illegible] finishing [illegible]

[illegible] refined coach-painters' lamp, [illegible]

[illegible] Prussian, [illegible] Ultramarine, No. [illegible]

[illegible] L. M. & D. shades, per lb., [illegible] pure emerald, [illegible] Brunswick, [illegible]

[illegible] fine crimson [illegible] Italian, [illegible] Eng. Ven. [illegible] red lead, 14c.

[illegible] lead, per lb., [illegible]; Colorado lead, [illegible] for striping, [illegible] pure dry [illegible]

[illegible] chrome, L. M. & D. shades, per lb., [illegible] Brandon, [illegible] French ochre, [illegible] English chrome, [illegible] French [illegible]

[illegible]—Drying Japan, $1.75; turpentine, [illegible] English [illegible] per lb. [illegible] English [illegible] pumice stone, ground and lump, [illegible] Extra fine and striping bronze, $1 per oz.; [illegible] to $1 each.

BRUSHES.

Paint—0, 65c.; 00, 75c.; 000, 85c.; [illegible]
[illegible]—[illegible] 75c.; 00, 85c.; 0[illegible]
[illegible] flowing, per inch [illegible]; Camel's [illegible] striping pencils, assorted, per dozen, [illegible] elastic and hard elastic var[illegible]
[illegible] Mills—Large, $8; small, $6.50.

COACH-MAKERS' INTERNATIONAL JOURNAL.

DEVOTED EXCLUSIVELY TO THE INTEREST OF COACH-MAKERS.

VOL. V.—NO. 12. SEPTEMBER, 1870. $3.00 PER ANNUM Always in Advance.

THE CLOSE OF VOL. V.

Month after month has glided away since the incoming of Vol. V, and we are startled to find that we are again in the midst of the extra work necessary at the close of the volume. We stand, as it were, on a narrow peninsula, looking backward over the route we have just traveled, and then changing our point of sight, we attempt to discern objects on the hazy line of the future. In looking backward, we take in at a glance the events connected with the enlarging of our paper, the stormy weather it encountered for a time, and its subsequent safe entrance into quiet waters. In fact, our history thus far has been one of continual advancement, in spite of all opposition.

Our growth has not been spasmodic, but steady and continuous. At the close of the present volume, those who subscribed in clubs sent in their names promptly, with but little intervening time. In a few instances only were clubs late in ordering, and these held back their names through scarcity of money, caused by want of steady work. During the past year our daily mails have added, in the aggregate, a handsome list, and now, before No. 12 has been issued, we have several names booked for Vol. VI, with the amount of subscription paid. Personal effort in the line of canvassing disclosed the fact that our friends were not only increasing in numbers, but awakening to a more lively interest in supporting a publication devoted exclusively to their advancement. It shows a healthy, and therefore a permanent change for the better, when we find our apprentices and journeymen, of various degrees of proficiency in their respective trades, reading and carefully studying mechanical works, and their employers encouraging them so far as in some instances to pay a portion of the subscription price.

And just here we remark that too many employers fail to enlist their *apprentices'* full attention to their trades, for the simple reason that they do not win them over by little kindnesses, which would cost but a mere trifle, or maybe nothing more than a kind word fitly spoken. One act of kindness, which our experience in canvassing brings to mind, is that of three or four apprentices in a factory wanting to subscribe to our paper, and could not because the pittance they received left nothing after paying their board bills. The employer, hearing this, said: "Take their names, and here is the money. They can pay me a little at a time, or have over-work if they wish." This spirit, carried out, will touch the manliness of any honorable young man, and be a profitable investment.

In forming our estimate of the number of journeymen who subscribe, and become hearty co-operators in disseminating a knowledge of our trade, we find that the whole number is far below what it should be. This may be occasioned by listlessness, or a greater love for reading matter of a more exciting character. This being *one* of the lessons we have learned in the past, we shall strive to break through their prejudices, which will, of course, be a work for the future. The number of notices from post masters, notifying us that "*your paper lies dead in this office,*" amounted to but *three*, two of which were paid for for the year. Our advertising columns have been kept pretty well filled, and that, too, from reliable houses, who deal in carriage goods; manufacturers of springs, axles, bolts, and other articles made of iron, steel and brass; valuable patented improvements; manufacturers of wheels, bent stuff, and whatever else belongs to that line; paints, oils and varnishes, ivory trimmings, bent glass, coach lamps, transfer ornaments, and other articles, all of which were brought directly to the notice of consumers, resulting in orders for goods to an extent which justified advertisers in continuing their patronage. Our Price List of Carriage Materials has been corrected monthly, the quotations being fairly given as usual.

In summing up, then, we find that Vol. V has taken a decided step in advance of Vol. IV, exceeding even the increase of Vol. IV over Vol. III. Having reviewed the past, it is but natural that we should *attempt* to lift the veil that covers the immediate future. As, however, the task will be a fruitless one, we forbear proceeding further than to judge from present indications; these point to continued prosperity. But we are not so blind as to suppose that we can run the JOURNAL through Vol. VI on the merits of Vols. IV and V. The folly of this course has been too plainly shown in other publications, resulting at length in a damage that could not be repaired, except by a change of proprietors. Everything in our day *moves*, and in moving is brought into contact with other objects, which turn it about, showing its different phases, or checking it for close examination. In our efforts to keep pace with moving things, we do not expect to do more than record what may be passing, and furnish such information as we can gather, counting nothing as having been brought to perfection, and in this spirit will be ready to publish other and better methods whenever convinced of their superiority.

The labor lying before us increases instead of diminishing; for, as one subject after another is carried to an end, they leave the number less, for they will not bear being republished only, as marked improvements have been made on them. But there is a wide field yet in which to operate, and very many changes going on, which assist in making up the character of each month as it wheels into its place on the calendar. The changes we propose to make on Vol. VI will not affect the size or price of the JOURNAL, although the outlay will add considerable to the first cost of the same to us. We shall add two leaves for the purpose of distributing the fashion plates, introduce some new headings, and rearrange the departments. The fashion plates will be immediately followed by their explanations, thus bringing the drafts and the comments thereon and dimensions in the most convenient position we can devise.

The several departments will come next in order, taking their places as in the practice of carrying forward a carriage in the shop, viz: wood work, blacksmithing, painting and trimming. The wood work will include body-making, wheel and carriage-part making, carving, and whatever legitimately belongs to this branch. The stereotyped headings of the wood-workers' departments will remain as at present, PENCIL, RULE AND SQUARE, and WHEEL-HORSE AND MALLET. The blacksmith's division will be designated by the heading, HAMMER, SLEDGE AND ANVIL; the painter's by PUTTY-KNIFE AND PAINT-BRUSH; the trimming by SHEARS, NEEDLE AND TACK-HAMMER. Queries and answers will be set up in the branch to which they belong, as well as correspondence having a particular bearing on either of the branches. Having given the branch departments the precedence, all other contributions will be arranged in a presentable form, in about the order they at present appear. Having now given an idea of the changes to be made on Vol. VI, we take our leave of Vol. V and its numerous readers.

BUSINESS DIRECTORY.

This department of the JOURNAL has met with such universal commendation at the hands of both our readers and advertisers, that we have decided to make it a permanent feature in our monthly.

We shall continue to insert names as formerly, for the sum of one dollar per year for each name, amounting to only about *eight cents* for each insertion. This small charge may lead some to think it unimportant; but the object is to place before our readers as complete a directory as possible for carriage goods, and the charge is made to cover the expense attending it. We hope every business house in this line will avail themselves of this means of keeping their names before those they wish to serve. Send in your names, and commence with the volume, and be sure to state the heading or headings under which you wish your names inserted, remitting at the same time the amount required. It is presumed every person knows his own business, and we insert names under the different headings, as ordered; and any one can enter under as many headings as he considers to his interest, the price being the same —one dollar for each entry.

☞ It is said the New Haven Wheel Co. do the largest business of any similar concern in the United States.

GLEANINGS.

On a recent visit to the carriage factory of Wm. M. Kennedy, No. 1536 North Twelfth street, we were shown a very handsome physician's phæton, built to order for Dr. Earhart, of Philadelphia. The body is a round cornered drop front pattern, hung on three springs. The back body loops are of a novel pattern, and, in connection with the iron spring bar, produce a unique design. We noticed that the trimming was handsomely finished. The top, especially, although large, and swept very rounding, lay easily and smoothly. The body is painted black, having a monogram on each side, composed of three letters, painted by Mr. SHREVE, a leading artist of this city. The carriage-part is striped with a heavy line and two distance fine lines. Uncle Joe E. has charge of the paint shop. * * Petry, Geissell & Bayha, 480 St. John street, lately completed a circular hearse, after the pattern given in the April number of the JOURNAL. It presented a fine appearance, no labor or expense having been spared in its completion. Carpenters were busy the day we called, finishing an addition to this large factory. The new building is 100 feet deep, 30 feet wide and four stories high, giving an increase of room much needed by their growing trade. * * J. G. Lefler, carriage-maker, corner of Sixth street and Girard avenue, is remodeling his shop building, which partially suspends manufacturing until the coming October. * * Gardner & Fleming, 214 South Fifth street, who rank among our best light work manufacturers, are also raising too much lime-dust to add to the beauty of the finishing coat of varnish. In other words, are tearing down and building up in the rear of their factory, which, when finished, will add greatly to their facilities for manufacturing. * * Charles Caffrey, of Camden, N. J., is also one among the number of our first-class carriage-makers, whose shop building is variegated by the contrast of new brick walls with those which time has blackened. His factory is receiving addition after addition, giving evidence of what we know to be true, viz: that by building a very superior article of light work, his business has grown into handsome dimensions. * * East, West, North and South we have seen, or have been informed by traveling agents and others, that carriage-builders are "enlarging their borders and strengthening their stakes;" proving conclusively that, on the whole, the carriage business is prosperous. * * Carriage builders in Philadelphia, in looking over trade thus far, have come to the conclusion that the season has been a very fair one. Orders have come in steadily, and sales have been effected to an extent at least satisfactory. * * Raw-hide Axle Washers were brought to public notice through circumstances somewhat annoying. Persons living convenient to the raw-hide manufactory of the patentees would often call, and request permission to cut axle washers from the scraps lying about; at length the idea suggested itself to the firm that all of the small scraps could be thus utilized, and having made the experiment with profitable returns, they pursued the trade until scraps could no longer supply the demand. The Darrow Manufacturing Co., (the company alluded to,) now cut twenty tons of leather a year into washers. * * The Chinese make vermilion from quicksilver. It is of a very fine quality, yet inferior to the best English vermilion in purity of color, Chinese having more of an orange tone. * * The total annual supply of quicksilver from California is not far from 50,000 flasks, or about 3,000,000 pounds. * * The London *Ironmonger* asserts that "the Pittsburg steel, both cast and rolled, is fully up to the mark of the best English; in fact, to such a degree, that it is not only supplanting our produce, but in every shape of tool it is being largely exported to the European Continent." American bolts are also said to excel the English make. * * Milk, taken as a drink, is recommended as an antidote for lead poison, in preventing colic. * * $2,000,000 of capital are now invested in machinery and fixtures for the manufacture of cotton-seed oil. How much of it is used to adulterate linseed oil who may be able to tell? * * Subscriptions to Vol. VI have already begun to come in, proving very conclusively that our attempts to give subscribers the worth of their money, have been, at least, partially successful. Let the tide of names roll in; for we do not entertain the slightest doubt but that we shall be able to make Vol. VI superior to the one just closed. * * We hear from every direction that our "Price List of Carriage Materials" pays for the price of the JOURNAL many times over. While in St. Louis some time ago, a dealer in carriage materials remarked to us: "That price list of yours is the carriage-makers' bible in this section; they swear by it." * * The "Chart of Ornaments" accompanying this number, adds another to the new features connected with the publication of the JOURNAL. * * A few more office charts on hand. These are not old stock; they first saw light in 1870, and will be pushed aside for something different before they shall have attained the age of *ten years.* * * Murphy's Sons, Blank Book and Stationery Dealers, of Philadelphia, have lately put a very handsome platform-spring top wagon in their delivery service. It was built by J. L. Fulton, of this city. Its main points of attraction are the "Sterrick patent wheels," and the full "*nickel plating*" of the springs, axles, handles, and the metal hubs on the wheels, which give to the whole a very rich appearance. The wagon is light, and tastily painted, striped and lettered. * * Vol. V of the COACH-MAKERS' INTERNATIONAL JOURNAL closes with this number, and belongs to things of the past. Let it rest on its own merits, and be improved upon wherever it came short, through lack of a more thorough knowledge of any subject treated on. * * A subscriber suggests that the JOURNAL be published semi-monthly. * * Mr. Benjamin Bruce, of Cincinnati, gave us a pleasant surprise on the 20th, by stepping unannounced into our office. As is his custom, he was on a flying trip to the eastern cities in search of novelties in the carriage line. * * Bruce Bros. & Co., Little Rock, Ark., write us: "Continue sending the JOURNAL," and they report that the carriage and wagon enterprise is getting to be quite extensive in Little Rock. In a few weeks they are to have a wholesale wagon factory, run by steam power, for the exclusive manufacture of heavy and light wagons. * * We were shown recently a beautiful metallic scroll for back bar to four-spring barouche or rockaway, combining both neatness and durability, which, we think, if seen, would be generally used. The manufacturers, Messrs. Fitzgerald & Flagg, of this city, inform us there is quite a demand for them, as well as for the metallic buggy scrolls.

RENEW.

At the close of Vol. IV, we were somewhat surprised at not receiving promptly a renewal of the subscription of many of our former readers; but experience has taught us that in most cases the cause was neglect, rather than an inclination to discontinue; consequently, for months after the commencement they continued to be received. How much better for them and us had they attended to the matter promptly. With this number we close another year with many of our readers. We have endeavored to do our duty as a journalist, and think we have merited a continuance of your patronage; and although you may receive an expiration notice with this copy, we trust we shall have the privilege of entering your names in our new mail books, and that you will forward them without delay. Our success has been very satisfactory, and, as elsewhere stated, we shall make some material improvements in the JOURNAL. We do not come blowing the trumpet, and promising things we do not expect to perform; but with a determination to reach the highest possible position as a disseminator of practical information, we enter Vol. VI full of hope.

If the JOURNAL has not met your expectations the past year, a line from you giving suggestions will receive due attention, and viewing them from our out-look, will endeavor to profit by them; but do not fail to *renew* your subscription at once.

☞ Reed & Bowen say they furnish "the most practical machine ever produced," and we should judge they were right, from the appearance of the cut.

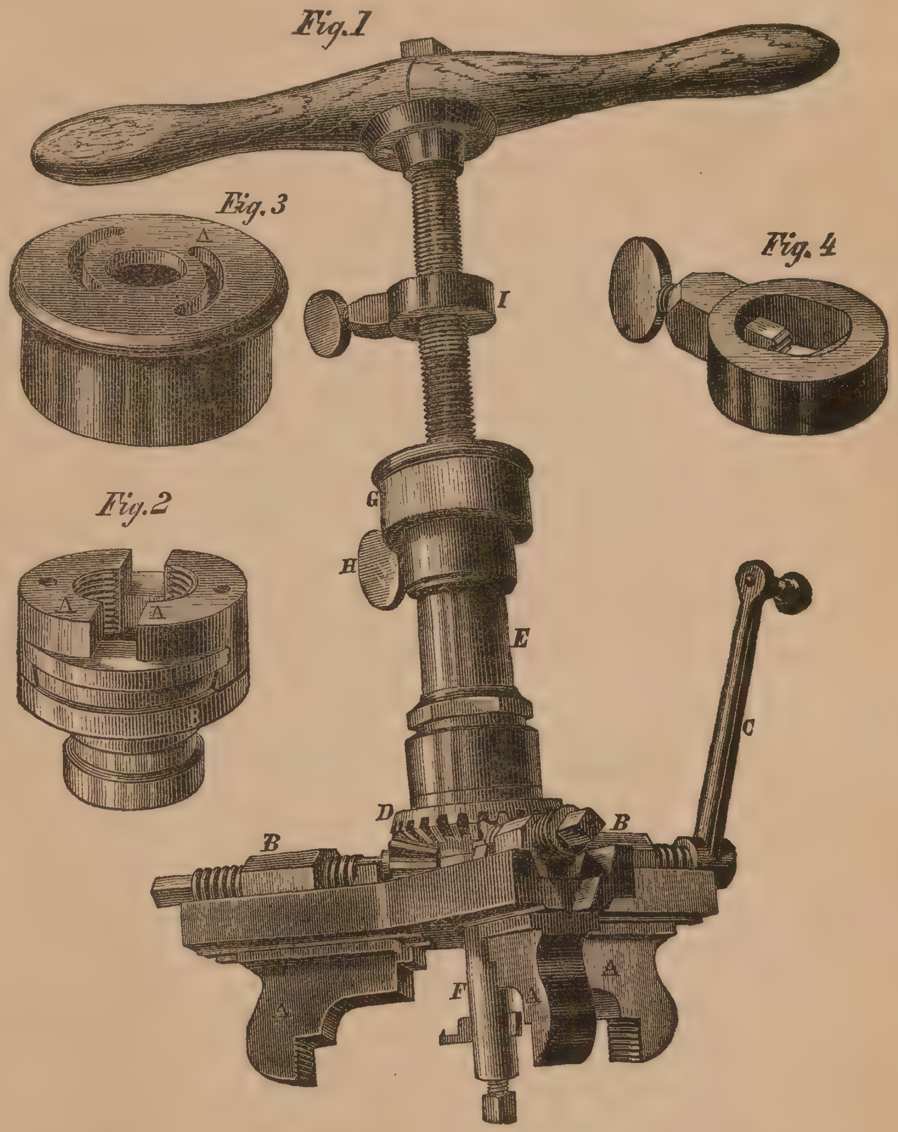
☞ Rubber Prop Blocks are much the best.

SILVER'S HUB-BOXING MACHINE.

The accompanying cut gives a very truthful representation of SILVER'S PATENT SELF-CENTERING HUB-BOXING MACHINE. This is one of several plates in our possession of machines which will appear in the JOURNAL as we may have space for their insertion. The machine here shown has been pronounced, by all who are acquainted with it, the *best* boxing machine in use. Combining every advantage possessed by other machines, they claim for it new and important features, which enhance its value as a labor-saving machine, prominent among which we notice the open or *Adjustable Feed Nut*, which is made in two sections, and which, by a slight turn of the cap to the left, is separated, so that the mandrel can be lifted out at once when the desired depth has been bored in the hub.

The operations of the *Gauge Plate* or *Nut*, and *Self-centering Chuck*, are such as to simplify and, at the same time, add to the effectiveness of the parts in performing the work assigned them. Other advantages might be named, but as space will not admit of a full description, we would advise interested persons to send for their Illustrated Circular and Price List.

Figs. 2, 3 and 4 are detached views of parts of the machine.



A glance at the history of this firm may not be out of place, as it adds another to the long list of those who, by industry and sterling integrity, (accompanied, of course, by inventive genius and business capacity,) have raised in a few years from the "day of little things" to a business of large proportions, supplying in its scope not only our own broad continent, but reaching into Europe, and to the Cape of Good Hope, South Africa.

A. R. Silver and L. A. Dole, under the firm name of Silver & Dole, began, in 1854, the manufacture of "Dole's Patent Hub-boxing Machine," invented by Levi A. Dole. Occupying at first a building situated in the rear of a furniture factory, they set to work manfully, and by producing machines of undoubted superiority, at length were compelled to come out of their obscurity, and make preparations for a more extended manufacture of their machines.

As an inventor, to be entirely successful, must be free from the cares of business, and bend all his energies toward his favorite pursuits, the introduction and sale of the patented articles depends largely on the skill of the salesman employed, and we learn that this firm was fortunate in securing the services of Mr. A. S. Felch, of Columbus, Ohio, who, after several months' active service as traveling agent, was admitted into partnership in the fall of 1855, the style of the firm being changed to Dole, Silver & Felch. Mr. Dole about this time received letters patent on his Saw Gumming Machine, and afterward on a very useful machine known as *Dole's Patent Meat Chopper*.

These serve to show how irresistibly he was led by his genius, and with what energy he pursued any favorite project. On being compelled to secure larger facilities for manufacturing, (about the time of their removal to the present location,) Mr. Felch retired from the partnership. Dole & Silver continued to manufacture the machines hitherto invented, and added others from year to year, as follows:

Dole's Patent Hollow Auger, January, 1860.

Dole's Patent Tire Upsetting Anvil, Jan., 1864.

Dole's Patent Emery Saw Gummer, Nov., 1864.

Dole's Patent Spoke Tenoning Machine, Oct., 1865.

In November, 1865, Mr. John Deming became a partner in the business, the style being changed to Dole, Silver & Deming.

The works were greatly enlarged in 1866, and two new inventions added to the manufacture, viz: *Dole's Arm Hub-boxing Machine*, and *Dole's Water Tuyere Iron*.

We design continuing this sketch in future numbers, as the subsequent changes were novel and interesting.

◆

CEDAR RAPIDS, IOWA, August, 1870.

MR. EDITOR:—Can a club of three or more have the JOURNAL sent to different places. For instance, there is a person in this place wishes to send a copy to his brother in another town; can he join a club here at club rates and have it sent there? C. C. B.

We have repeatedly stated in the JOURNAL that, "The JOURNALS for a club may be sent to different post offices."

A person getting up a club on his own responsibility, can get subscribers wherever he has opportunity, and the JOURNAL will be mailed as directed at club rates, and changes of address made as often as notified. When the directions of a JOURNAL are to be *changed*, say at what post office it was received as well as the one it is to be sent to in future.

We are ready, pen in hand; let us have the names right fast. Give your spare moments, friends, for one month to active canvassing, and we promise to improve on the JOURNAL as our receipts will warrant.

IS IT YOUR PRACTICE?

To do what? Why, read your JOURNAL carefully, thoughtfully, and with not only a spirit of acquiescence in whatever may be *printed*, but also with somewhat of a desire to combat the opinions advanced! This may seem to be a foolish question to put to our readers, but we have done so, and will give our reasons for so doing.

FIRST. The *positive* evidence we have to the contrary is, that questions are asked concerning matters which appeared in the number preceding that in which a reply is requested. This has happened in two or three instances; and in others the reply to a query has been but two or three numbers back. Now, these are the more glaring instances, yet by no means the class we would like to reach.

SECOND. The circumstantial evidence is based on the seeming want of interest on the part of many of our first-class mechanics with whom we are acquainted. We argue that they do not read, or reading, do not give any subject a second thought, from the fact that they do not combat the opinions of those who write for the JOURNAL.

As we write we can call to mind men who are counted first-class in body-making, blacksmithing, painting and trimming, who might, if they would, send in monthly choice bits of information, coming with all the freshness of the shop, and pointed by their personal experience on the very day the article should have been penned. As we are not in the receipt of such articles to any great extent, we conclude that our *careful* readers are few in number.

Doubtless this seeming indifference may be attributed in part to a want of just pride which men should feel in the occupation in which they are engaged. Whatever is commonplace to them, because of its daily recurrence, they esteem to be of no value to others, forgetting that nothing has yet been brought to perfection, and also forgetting that the methods adopted by different mechanics are as various almost as their features. But you may reply, "I can't write and so arrange my sentences as that they will express my meaning." We will not listen to such an excuse. You can converse freely, and if so, there will be no trouble in making yourself understood, if you write about that which you fully understand. Let us have through Vol. VI a *warm* time in the departments; not in mere words of sarcasm and ridicule, but in a friendly and humorous vein if you please, taking up every idea advanced and submitting it to the crucible, giving us the result. Let us hear from every section.

◆

☞ Veatch says his advertisement in last number is doing him considerable good. Rush the orders on him, and make him sorry he advertised.

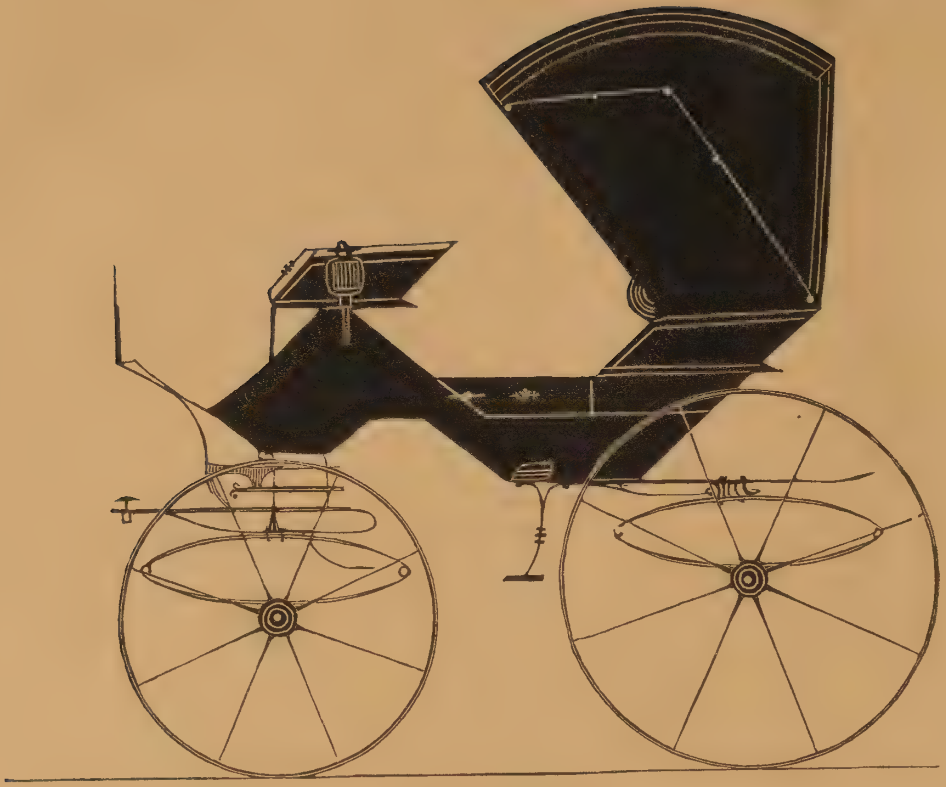
ADVERTISEMENTS.

JOHN W. MASURY, successor to Masury & Whiton, Manufacturers of White Lead, Zinc and Painters' Fine Colors, 111 Fulton street, New York, would call attention, through his advertisement, to the *purity and exceeding fineness* of his colors, qualities which every painter knows full well the value. Coach painters' colors are put up in patent cans, and being ground as fine as tube colors, all the annoyance of attempting to obtain fine color by the old method of grinding is entirely done away with. The objections that might be raised to colors mixed and canned becoming fat and unfit for coach painters' use, we are informed are all laid aside by those who have used them. The exceeding fineness of the colors, and their free working qualities, are due to a process in grinding. One coat of ivory black, (painters inform us,) is equal in body to two coats ground in the usual way, and the intensity of the color being so much greater, most beautiful work is the result. By referring to the advertisement, and reading it *carefully*, it will be seen that this house supplies everything required by the coach painter. Felton, Rau & Sibley are the sole agents in Philadelphia for the sale of these colors.

FITZGERALD & FLAGG, one of the most reliable business houses in Philadelphia, continue to keep before the readers of the JOURNAL the "Mellenger Jump Seat," and for which there is quite an extensive sale. We are informed the first order is invariably followed by the second from the same party. The seats are adapted to almost any style of wagon, and cost no more than the ordinary way of ironing. The "Metallic Scroll Ends" are also manufactured by them, and by many persons are considered better and cheaper than those made of wood. They are also manufacturers of all kinds of Carriage Castings, of the latest and most approved patterns. We hope our friends will remember them when ordering.

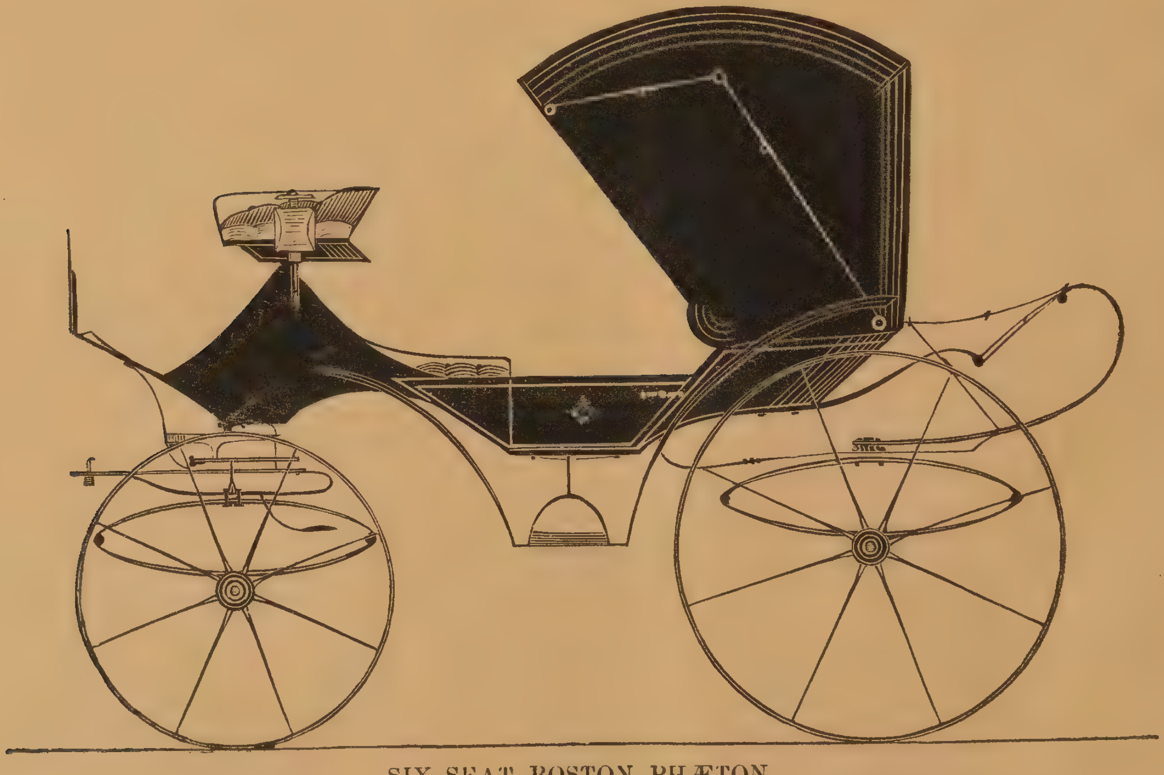
CAYUGA LAKE BENDING WORKS, Union Springs, Cayuga County, N. Y., Charles H. Adams, proprietor, claim to use the best timber and produce the best and handsomest work in the United States. Any size of *high top* or *standing bows* made to order, and sent to all parts of the United States and Canadas. Having a thorough knowledge of the requirements of the trade he seeks to supply, no pains have been spared to have the *forms* perfect. Spokes, Felloes, Shafts, Poles, Handles, &c., always on hand. Send for price list.

IN our Want Column will be found an advertisement for a purchaser for a very desirable business stand, located in a thriving town in this State, commanding a good run of custom. A rare opportunity is offered to any one desiring to establish himself in a paying business. No other shop within ten miles.



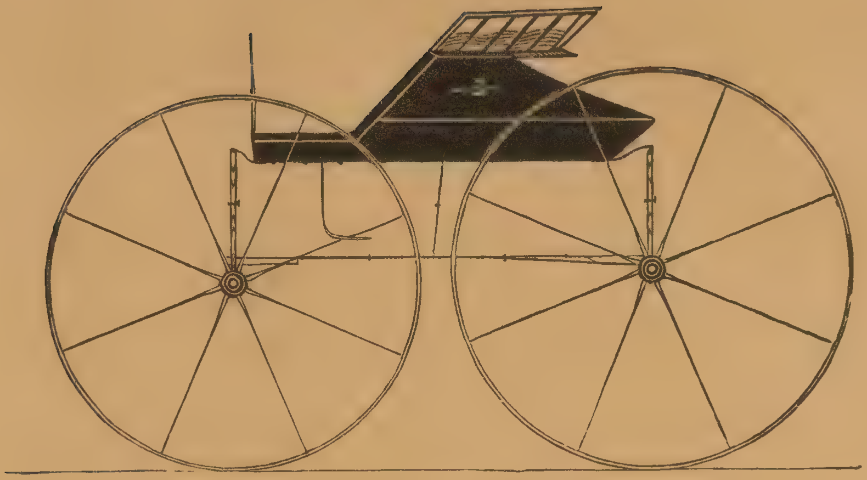
MAGIC PHÆTON.

Plate No. 48.—Half-inch Scale.—Explanation on Page 181.



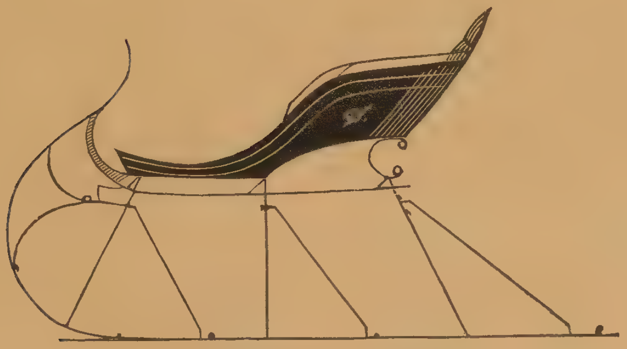
SIX-SEAT BOSTON PHÆTON.

Plate No. 49.—Half-inch Scale.—Explanation on Page 181.



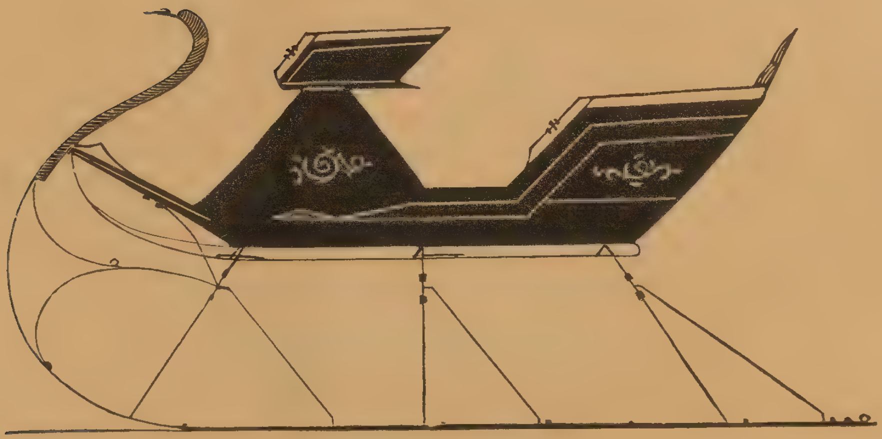
GLENDALE NO-TOP BUGGY.

Plate No. 50.—Half-inch Scale.—Explanation on Page 181.



MERRIMAC CUTTER.

Plate No. 51.—Half-inch Scale.—Explanation on Page 182.



OTTAWA SLEIGH.

Plate No. 52.—Half-inch Scale.—Explanation on Page 182.

CHART OF ORNAMENTS.

A new feature, in closing a volume of our monthly, is that presented in the front of this number, which is a chart of monograms and ornaments, arranged from cuts heretofore published. Those who have been regular readers of the JOURNAL will remember that, during Vols. IV and V, every issue has had ornamental designs, with hints as to the drawing and coloring; and now, at the close of Vol. V, we have condensed those scattered designs, and, by the aid of a beautiful oval centre piece and a chaste outside border, have produced a chart of a character not heretofore published.

To those who are studying to draw and paint ornaments, these designs will furnish as great a variety of lines and forms as can be obtained from any other source, and by referring to them in the numbers in which they severally appear, an idea of their coloring may be gained. The sheet or chart may be cut from the book, and mounted on a frame, previously covered with muslin—in this condition being handy to refer to, trace from, or examine with a view to forming new combinations from the study of those given. As an office ornament it would not be out of place, and might, in some instances, be of value even where transfers hold sway.

The apprentice or journeyman who desires to acquire the free use of the lead and ornamenting pencils, should procure tracing paper or gelatine, and copy very carefully each one of the ornaments, and having acquainted himself with their form, reproduce them in a drawing book, depending on the eye alone, after marking the centre lines. This practice gives confidence, and when the pencils and colors are taken in hand to ornament a body which must bear criticism, the confidence imparted by the memory having been previously exercised in this direction, will be plainly seen in the true curves and sharp, decided touches.

But whatever of value the "Chart of Ornaments" may possess, our patrons will certainly decide on. We have not spared the extra expense attendant on its publication, and have carried out the plan, in the belief that nothing will be lost in the end.

Our plans for Vol. VI include much that will interest the painter; not the least being that which refers to drawing and ornamenting.

☞ Is there a carriage shop where the JOURNAL circulates that does not use Johnson's Bolt Cutter? If so, let them make amends by ordering immediately.

☞ Boxing and Tenoning Machines furnished at short notice. Address this office.

☞ J. G. Rouse & Co. occupy one of the finest buildings in this city. See cut in advertisement.

SEND IN YOUR CLUBS.

Information is being received of active work in different sections of the country raising clubs for the JOURNAL. September is the month to do this work, and those who have not commenced should get at it in earnest. Our terms are the same as they have been for two years past, and we purpose to keep them there, unless forced by circumstances beyond our control to make a change, and we hope, with the support already given, to be able to improve in its general appearance yearly. We believe we have the confidence of coach-makers all over the country; at least we have tried to merit it, and nothing shall swerve us in pursuing the same straight-forward high-toned course.

There is hardly a town of note in our country but we can point to some tried and true friends, and we hope that they will consider this a personal appeal to them to use their influence in sending in as large a club for Vol. VI as possible. Do not wait for us to visit you. Remember, our time is precious at this season of the year especially; but go to work in earnest. Every town ought to raise a club of ten or more, and at $2 each, no journeyman or apprentice should be without a copy. May we not have *one thousand* NEW subscribers before the first of October? What say you?

☞ We are reliably informed that Post, Herkner & Co. furnish the *best* Rubber Enameled cloth in the market. See advertisement.

Fashion Plates Explained.

"MAGIC" PHÆTON.

PLATE NO. 48.—We herewith exhibit a light four-seat half-top phæton. The depth of panels gives an appearance of sufficient heaviness to suit the taste of those who admire that type of beauty, and it is a point not to be lightly esteemed. An improvement has been made, in that the coupling is shortened. This idea has been brought to our notice by the repeated objections made by parties to the length of coupling commonly given. The progressive carriage builder should be willing and anxious to please his customers, and as those who put vehicles into actual service more readily detect the defects a carriage possesses, the builder should weigh well their objections; for by this means only will he be enabled to advance step by step toward perfection. The owner of a pair or more of valuable horses is anxious to cut down as much weight as possible from the vehicle they must draw, as well as to have the carriage run easy; and experience proves that a short coupling offers the least resistance to the power exerted by the animals.

DIMENSIONS.—Width of body to take 46 inch bows. Body and seats square corners. The door is made shallow, coming on a line with the belt. The belt is carried around the body the depth of door, thus furnishing a panel space to introduce any color that may be desired, and an opportunity to distribute the colors, and add materially to the general appearance. Hubs: 4⅜ by 6½. Front band: 3⅛; back band: 3⅝. Spokes: 17-16. Tire: 1 inch by ¼, steel. Axles: 1⅛, steel. Springs: 1½, 4 plates. Wheels: 3 feet 8 inches and 4 feet 2. Track: 4 feet 10 inches.

PAINTING.—Body: belt, dark brown, the remainder black. Seat skirts defined by an edging of white, (fine line.) Carriage part: black, with ¼-inch line of brown, centred with a 1-16 inch line of white.

TRIMMING.—Brown morocco; head lining, brown cloth.

Mountings: gold.

SIX-SEAT BOSTON PHÆTON.

PLATE NO. 49.—A very light and graceful appearing body. The back quarter has a heavy round, and the back panel is swelled, the body having two inches turn-under. The boot is set on a flat surface, falling back. The side at front projecting 1¾ inches, and swelled from this point on around the body. The front seat is indicated by a railing and the top of a cushion. With its accompaniment of C springs and double fenders, this produces a very handsome turn out, and by no means a shop keeper.

DIMENSIONS.—Width of body to take 48 inch bow. Hubs: 4¾ by 7½. Front band: 3⅜; back band: 4 inches. Spokes: 1¼. Tire: 1⅛ by 5-16, steel. Springs: 1½, 6 plates. Axles: 1 5-16, steel. Wheels: 3 feet 6 inches and 4 feet. Track: 5 feet.

PAINTING.—Door and front quarter panels: purple lake. Boot and back quarter: black. Carriage part: lake, striped black and gold.

TRIMMING.—Wine-colored morocco.

Mountings: gold.

GLENDALE NO-TOP BUGGY.

PLATE NO. 50.—This body has square corners. It is a slat seat, round cornered. The front is cut well down, admitting of easy ingress. The body being plain, will bear finishing up with but little trouble, and give the painter an opportunity to bring out a handsome surface. The front line of bottom panel is square, the back beveled.

DIMENSIONS.—Body: half width, 20 inches on seat; three-quarter, 26 inches; full size, 30 inches. Hubs: 3¼ by 6 inches. Front band: 2¼; back band: 2⅝. Spokes: 13-16. Tire: ¾ by ⅛, steel. Axles: ¾, steel. Wheels: 3 feet 11 inches and 4 feet 2 inches. Track: 4 feet 10 inches.

PAINTING.—Body: bottom panel and seat skirt, olive; outline of body traced with fine line of white. Carriage part: olive, striped, 3-16 line of black, front edge lined with white.

Trimming.—Olive-colored cloth, black patent leather welt.

MERRIMAC CUTTER.

Plate No. 51.—An improved style of Portland cutter. The draft shows a round corner, and the back panel is swelled. The sides are taken from ½-inch poplar, and have 2½ inches flare. The front of body rests on the two front beams, while the back part is swept up and supported by scrolled iron braces, producing a very light appearance. The hind beam is rounded or chamfered, except where the foot of scroll iron rests. This plate cannot fail to find admirers, as it introduces a pattern of cutter entirely outside the old beaten path.

Dimensions.—Width on seat, 31 inches. The running part should be taken from good hickory, and made very light. Size of runners: ¾ inch square; beam: ¾ by 1 inch. In ironing, use straight stays, placing them where they will support or resist the greatest strain. Steel shoes. Track: 39 inches.

Painting.—Cutters admit of an almost infinite variety of styles in painting, and they will bear an amount of display which would be out of place on carriage work. We would prefer this body painted with lake or Bismarck, relieved with two or three different colors in striping, and the running part carmine, with cuir (kweer) fair leather-colored coarse lines, and fine lines of black and gold. At Portland, Me., Amesbury and Westboro, Mass., white, drabs of various tints, delicate greens and browns are employed, and the striping selected to contrast.

Trimming.—Red plush, with green plush welting and edge finish. Trimmings portable.

OTTAWA SLEIGH.

Plate No. 52.—A four-passenger sleigh. The body has a square corner behind. The narrow belt on side terminates in front with a half diamond point. The front seat is of the late French pattern, square corners. It is well elevated, being supported by a boot enclosed by fashionable lines, and having a bracket front, connecting with the runners.

Dimensions.—Width of body, 34 inches on seat. Sides beveled 3 inches. Boot swelled in, to obtain a narrow seat bearing. Runners: 1 inch square. Beams: 1 inch by 1¼ inches. Steel shoes. Track: 39.

Painting.—Body: the irregular belt space deep buff, scrolled and fine lined with gold, and back shaded with a light brown. Panels: medium dark green, lined with white. Skirt of front seat: deep buff; outer edge striped with broad line of brown edged with gold. Runners: deep buff, striped brown, black and gold. The boot and spaces which are connected with it: black, striped, ornamented or not, as fancy may dictate.

Trimming.—Green plush and yellow or buff welting.

Correspondence.

☞ *We do not hold ourselves responsible for the views of our correspondents.*

For the Coach-Makers' International Journal.

A COACH-MAKER'S CRUISE TO JAPAN.

BY FRED. PUMICE,
Author of "Stray Steps," &c.

CHAPTER XVI.

There used to be a line of "daks" running from Bombay across the Peninsula of Hindostan to Calcutta. This was a long and wearisome journey, and very monotonous. After once crossing the range of the Western Ghauts, the country is simply a flat, dry and uninteresting plain, with nothing to attract the attention of the traveler, except the almost innumerable villages and their teeming superabundant population, with the very large sprinkling of mendicants, both religious and otherwise. Begging appears to be the acknowledged normal condition of about one-third of the people of India. Brahma and Budha are the greatest nurseries of crime and legalized vagrancy in the world. The number of beggars in India, and their horrid appearance, actually *beggars* description. Some are devotees, and give up their whole lives to the fulfillment of some ridiculous vow, such as declaring they would never sit down again as long as they lived, or that they would never cut the nails of the fingers while they lived, or that they would hold up one hand above the head until they died; and this they religiously observe, fully satisfied that the god Brahma will give them a front seat in their heaven in the great hereafter.

These "daks" are a common carryall rockaway, open at both sides, and with an awning along both sides, and the seats are arranged to sit facing the sides of the vehicle, so that at night the passenger can stretch himself to rest. They are drawn by two of the small native ponies, unbroken as a wild mustang. The government had stations or caravansaries every fourteen miles, where the cats of ponies were changed, and where the unfortunate passenger *might* get a feed of scraggy chicken and rice, if he had the patience to wait while the slow, lazy native keeper caught, killed and cooked the unfortunate fowl; and then to change horses, he had to indulge in a good square fit of Anglo-Indian swearing to get the blessed coolies to work hitching up the new team, and when hitched up, he had to literally put his shoulder to the wheel to start the kyoodal team; and when started, he has to jump aboard, and let the racers go; for go they will, at a gallop or run, until they are played out, that is if they go at all; for half the time they won't stir, and a passage by dak is a good deal like the Irishman who offered to work his passage on the canal boat, and the captain acquiescing, set him to drive the horses. Once in a while there is a little excitement over the cry of "A tiger."

Aside from this line of daks, the usual mode of traveling is by palankeen, a box set on two long poles, and carried by four men on their shoulders. There are eight carriers to each palankeen, besides torch-men and runners; each four carry the traveler about forty rods, when the other four relieve them. A man travels thus 80 or 90 miles in 24 hours.

Well, I could keep on writing about the peculiarities of this great Indian country for a month. The only trouble with me is to condense and select which is most interesting, or which may be most acceptable to our readers. The other trouble is that the publisher may not be able to spare the space necessary for a fuller description of India. I have had peculiar opportunities for writing or speaking of India, it being my luck to have traveled semi-officially over a great part of Hindostan, and having lived for a number of years among them, I can speak from experience of this ancient and interesting race. However, we must tear ourselves away, and come back again to our "Cruise."

We were bound for Singapore, a city built on an island of the same name, and situated at the extreme southern point of the Peninsula of Hindostan. The island is composed of small hills three or four hundred feet high, and only a short mile from the main land. The consequence of this was, that the Island of Singapore used to be overrun with tigers, who swam across the narrow strait.

Singapore is a right smart place, and has, possibly, as great a variety of population and peoples as any city in the world. The government, garrison and chief merchants are British, but the people are mostly Chinese and Malays. The Malays are mostly fishermen, and they are also the police. There are Klings from Western India, who are the small merchants or peddlers of the city, and the Bengalese, who are the grooms and washermen. And then the inevitable Parsee merchants. There are Mahomedan mosques, Hindoo temples, Chinese joss houses, Christian churches and the houses of the European merchants, which make a conglomerate style of city architecture seldom met with outside of Singapore. Add to this the Kling and China bazaars, where goods are astonishingly cheap; barbers of the perambulating class, shaving and cleaning ears; peddlers of soup, fruit, agar-agar, or sea-weed jelly, and our very particular friend, the traveling kitchen, rigged with a Chinaman or Coolie as the foundation, a long pole across his shoulder, a stove at one end, and a small table at the other, who will give you a good mess of shell-fish for three half-pence. We used to charter half a dozen of these ducks, and eat our three half-pence worths, six or eight of them, at a sitting.

To our Readers.—I had intended to finish this sketch of travel, *i. e.* my Cruise to Japan, in this, the twelfth number of the Journal; but there is so much to write about, and so many interesting places to describe, which I had visited on "the cruise," and so many different types of people to get acquainted with before reaching the *country of the Tycoon*, that I will be compelled to carry my sketches on through several more numbers; and trusting that all of those who have followed me thus far will feel interested enough to continue and finish our cruise, I am yours, truly,

Fred. Pumice.

For the Coach-Makers' International Journal.

MECHANICS.

BY N. C.

The farther he inquires, and the wider his sphere of observation extends, the more fully they continue to open upon him in increasing abundance; so, as the study of one prepares him to understand and appreciate another, refinement follows on refinement, and wonder on wonder, until a flood of intellectual light is poured upon him, of which he was previously incapable of forming any adequate conception.

A certain degree of acquaintance with abstract science, is highly desirable to every one who would make any advance beyond the ordinary routine of his profession. He should possess clear perceptions of time and space, of motion and its velocity, quite independently of any consideration of the particular body moved, measured or arranged, as a preliminary to the study of the definite details of mechanical philosophy. The words *space, square, circle,* &c., convey an abstract idea of something in itself complete and so distinct from everything else, that a person is quite certain of understanding precisely what is meant by the employment of either term. It is far otherwise with natural objects, for in such the several relations are varied, and in every phase are different ideas produced of what is meant by the particular word used, even when there is no synonym.

The object of the philosophic mechanic is to become accurately acquainted with the properties of all the substances he uses, to learn the transformations produced by natural causes, to study the laws which govern them, and the manner in which changes are brought about. In the pursuit of these inquiries he can most readily resort to books, but even then he must learn to distinguish *facts* from *theories*, the former being well-established truths, while the latter are only plausible conjectures, to which men are led by an attentive study of facts.

The first duty of a student in any branch of mechanical art, is to make himself acquainted with what is already known, and what has been done by others who have preceded him, which can only be accomplished by a careful study of the past history of the art, in such books as are within his reach; this will not suffice, for he must, if he desires to excel, not only *read*, but he should *write* and converse on the subject, thus bringing mind to bear on mind, until in the end, if he be possessed of ordinary mental capacity, he will find all obstacles are overcome, and a complete mastery of the subject obtained. He will then be in a condition to do something which no one else has accomplished, or at least to improve upon the efforts of those who have gone before him in the same field of investigation.

Above we have hastily sketched on the benefits accruing to mechanics, and from the proper exercise of their God-given reasoning powers—desirous of inducing to compare, analyze and deduce for themselves, from the laws governing nature, the great truths which constitute the boundless domain of science—convinced, as we are, that there is not a mechanic in the land who, by a just appreciation and use of his own mental faculties, is incapable of contributing something to increase this store of knowledge, with advantage to himself as well as his brethren.

As an incentive to pursue the course here suggested, we have to but look around us and inquire into the early history of the truly great men which our country has produced. What are they? To whom are they indebted for their greatness? They are, almost to a man, *self-made men*, (to employ a common but a very expressive term,) and owe their elevation to indomitable energy, perseverance and *will to do.*

I wish to say to our mechanical friends, to contribute the results of their observations in their various callings, and to bear in mind writing is like everything else pertaining to man, perfection is seldom arrived at in a primary effort; but improvement in expression, as with the employment of our reasoning faculties, follows its use. Should your first literary attempt be self-condemned, evince your manhood by a second and continual trial, and depend upon it, success will crown your efforts, and self-approval in the end result. Whatever position in after-life you are called to occupy, the first triumph will be looked back upon with more proud satisfaction than ever caused an accelerated throb in the breasts of Alexander, Julius Cæsar or Napoleon at their bloody conquests.

We would not be understood as exclusively addressing age or class, but call upon all, without distinction, to commence at once that most ennobling and important of all works, *self-culture*, and thus do for their own social benefit what cannot be done by proxy, and would remind those who have hitherto neglected this matter, that it is never too late to begin.

Instances are not rare in history, wherein men who have passed the meridian of life before acquiring even the rudiments of education, have afterward become celebrated men of letters and science, and the proverb says, "What man has done man may do." N. C.

☞ The "Mellinger Jump Seat" has a large sale, we are informed, and gives entire satisfaction.

☞ The Driscoll Screw Knob does not need any recommendation, it speaks for itself.

PENCIL RULE & SQUARE

D. BOARD EDITOR

SCALE DRAFTING.

(*Concluded.*)

In the previous number we gave a Clarence coach, and introduced the subject of colors and their application. The manner of preparing to produce a colored draft, and the mere mechanical operation of applying the colors, are similar on whatever style of vehicle the draftsman chooses to produce. But a variety of touch, and that delicate handling of the colors employed, which at once stamps a colored draft as first-class in every particular, depends not a little on artistic taste. On a standing-top coach, as, for instance, the one given in the August number, the colors require to be laid on evenly, and with clean edges, and as the greater part of the draft represents wooden panels, there is no effect to be given other than to show solid, unchangeable surface. A tassel or a festoon may be added, which would require some little knowledge of shading, so as to represent properly the folds made by the cord, which serves to loop the festoon up, or of the particular form of a tassel. But in the cut here shown, with the top thrown down, it will be required of the student to represent a leather top, and that in the wrinkled appearance it has when lying down. This is a LANDAU, with the improved SAULSBURY BOOT. Having secured a correct draft with the lead pencil, and further prepared for coloring, as laid down in the previous number, you will begin by addressing yourself to the representation of the top.

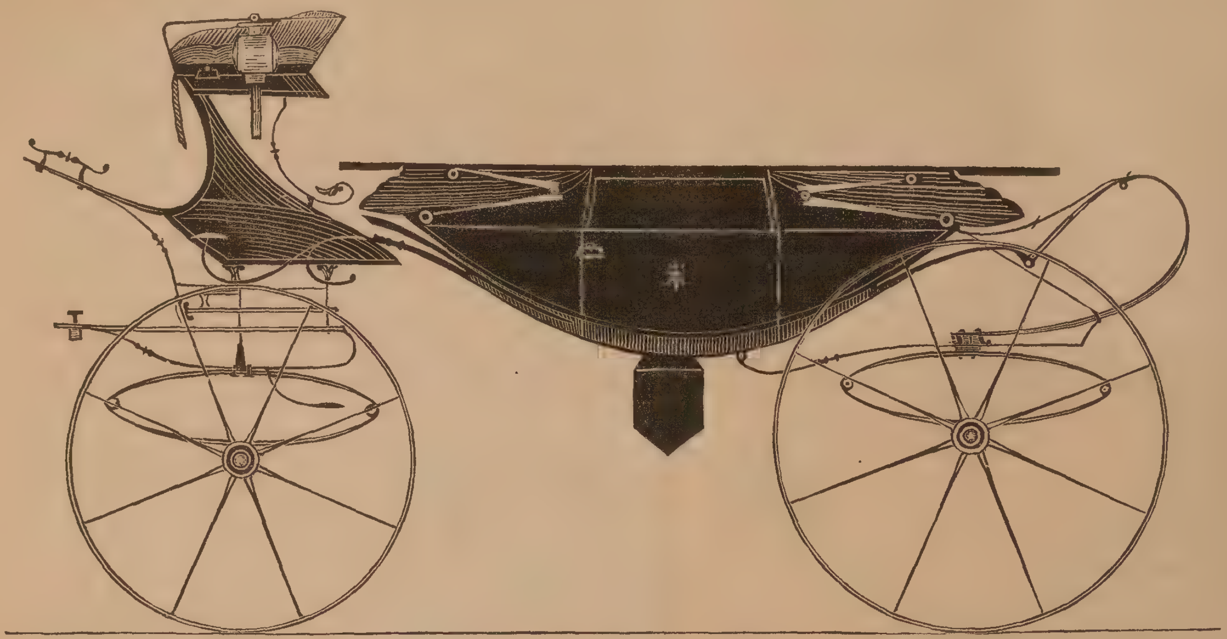
First, strike the small circles, which represent the top props and the knuckles, with India ink or lamp-black, and then ink or color in the joints; these are colored black, as are also the head pieces and the outlines of the bows.

We would here caution the student against carelessness in the matter of obtaining a correct outline of anything which he may essay to draw, and it is of the first importance, in the representation of an object in a folded or wrinkled form, that each portion should be represented by distinct outlines, which will at once present to the eye of a beholder the true form. The tinting to be governed by the outlines, or at least the tinting should not confuse or obliterate the outlines. In the representation, then, of this top, a distinct outline is first to be secured, and afterward the tinting is introduced with the pen, using India ink; or shading, using a fine-pointed sable pencil. The top having been completed, outline the dickey seat, fall, lamp and boot, using black, as this gives the correct coloring of that portion of the finished carriage. When the outlines are finished, commence shading the cushion, then tinge in the seat skirt, which may be black at the back part and lightened off toward the front.

Next follow down on to the boot, laying on an even coat of black over its whole surface, also the toe board. When the black is dry, bring out the division line, mouldings and appearance of the round, with china-white, applied with the drafting pen. The dividing line on the side of boot, and moulding lines, should be drawn heavier than those which are employed to give the appearance of a round. The moulding lines on boot to be drawn with white are the inner lines running from top of boot to the toe board, and the front and bottom inner lines on the lower part of the boot. Now set the pen finer, and put in the fine lines, which give the appearance of the upper rounded portion of the boot, using a pattern to guide the pen.

The front loop should next engage the attention, which is also put on with china-white; that is, so much of it as crosses over the boot, including the step, and so much of the loop under it, as is shown on this drawing. We will mention, in passing, that it is the better plan to use a color throughout every portion of the draft, where it is required, before taking up any other color; therefore, all iron work connected with the body and rocker should be painted before laying by the black.

Black having been dispensed with, the next step will be to decide on a panel color. Carmine is a very rich color, and would be brilliant and showy; but before we fully decide to employ it on this heavy, stately carriage, let us stop a moment and inquire whether it will accord well with its general appearance. Colors give the appearance of lightness and heaviness, according as they are light or dark; and as we wish the Landau to appear rather heavy, because it is large, taken as a whole, we decide that carmine, or any other light brilliant color, would be out of keeping. Further, the trimmings should agrée with the color used on the panels, and if carmine is suitable for the panels, it, or something approaching to it in color, is suitable for the trimming; thus carried out practically, we should have a bloody or fiery-looking piece of work, offensive to persons of good taste.



Having set aside carmine, we will take quite a different color, one among several which may be employed, namely, PLUM COLOR. This color is produced by the use of LAKE and BLACK; we select PURPLE LAKE, and by saddening it with BLACK, produce the required shade of PLUM COLOR. It is to be applied to the panels of the body, and laid on in the manner heretofore given. When dry, proceed with the mouldings, using for the purpose, in this case, FRENCH BLUE.

The carriage-part comes next. We will take for this draft a color a shade or two lighter than the panels, produced by a less proportion of BLACK being added to PURPLE LAKE.

Next in order is the representation of gold mounting. The parts to be so brought out are the lamp, dickey-seat handle, toe-board handle, door handle, face of hubs, and lastly, the top prop nuts and the joints. The top nuts to be gilt in the centre, leaving a black surrounding edge, and the joints to have a gold line through the centre.

All that now remains to give a complete finish is to add an ornament or monogram. We propose to use a monogram, and will employ FRENCH BLUE, lightened very delicately, if you please, with gold.

We have now fulfilled our promise made in the outset, "that we would carry the Scale Drafting through from a pencil sketch to a finished French colored draft."

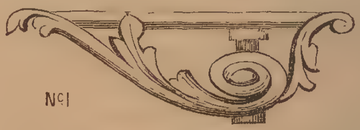
To those who began their subscription to the JOURNAL subsequent to the commencement of this all-important subject, we would state, that the first article under this head appeared in Vol. IV, No. 9, was left out of Nos. 3 and 4, of Vol. V, on account of the press of other matter, but otherwise appeared regularly in each succeeding number until the close. During this time we have given forty-five illustrations, thirty-five of which were illustrative of drawing instruments and patterns, and ten were drafts, ranging from a buggy, through different styles of carriages, concluding with a Landau. The drawings and explanations have been attended with many hours of severe mechanical and mental labor, and we now feel a sense of relief as we pen the concluding sentences. From the careless and indifferent we do not expect to receive any thanks, but wherever there is an earnest wood-worker, who reads the JOURNAL, and is desirous of improving himself in this particular, we feel assured that we shall receive our reward at his hands.

In this department we shall endeavor to keep up a lively interest, and present, from month to month, such information as shall be of lasting value, and as a first step in that direction, we introduce the construction of a SAULSBURY BOOT.

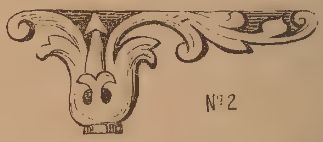
DESIGNS FOR CARVED BODY BLOCKS.

In the May number appeared a design for hearse urn, by HENRY FIRG, of Philadelphia, and in that connection we promised that at some future time we would give patterns for body blocks, brakes, or pump handles, back bars, &c. The accompanying cuts of body blocks are from the designer and carver mentioned above.

Nos. 1 and 2 represent two different designs of long body blocks, having but a single bearing on the front bed. The back iron stay is bolted to the boot, and the block is fitted over the L plate, producing a complete finish. Other designs may be suggested by these; for, after having decided on the proper size of the blocks, it is immaterial what form is chosen to ornament them.



Nº 1



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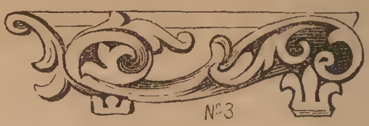

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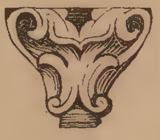

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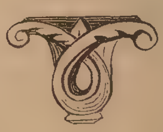
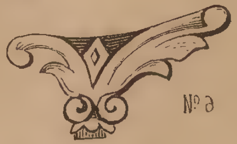




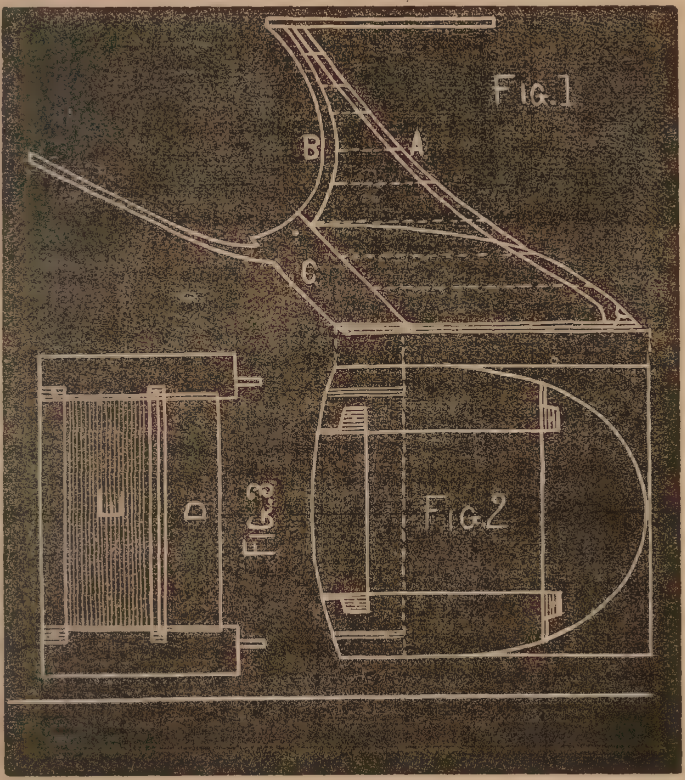
Nº 6

No. 3 is a more elaborate pattern, and will require a skillful carver to bring out its beauties. It will be noticed that it has two bearings, arranged for bolting through the front bed and back bar.

Nos. 4 and 5 show two short blocks of different designs, both of which are easily carved, and when finished and properly touched up by the painter, will look very neat. They are to be bolted through the front bed to the boot, the back supported by an iron stay.

Fig. 6 is also a short block, but is designed for a swept body, as the top curve of the block will at once suggest.

Following these, we intend to give various designs for brakes, or pump handles, back bars, spring bars, &c. While this class of instruction may not be of practical value to many of our patrons, we trust that such will be repaid by that sense of satisfaction which the mere knowledge of a thing imparts.



MANNER OF CONSTRUCTING THE IMPROVED SALISBURY BOOT.

¾-inch Scale.

PART FIFTEENTH.

BY A PRACTICAL CARRIAGE ARCHITECT.

Fig. 1 represents the side elevation. *C* is the front pillar and toe-board bracket, which is 4 inches thick, having 1-inch turn-under. The toe-board bracket is 1⅝ inches wide from face of pillar. *B* is the horn bracket, 4 inches thick, framed to front pillar by a slip tenon. *A* shows a centre piece, which serves as a guide for the sweep of the centre. The dotted lines represent the pieces of poplar that are laid horizontal and butted against the centre piece *A* and pillar *C*, until we reach the division between the top and bottom, which is boxed down to show a distinct line between the two parts. The pieces in the top division come inside of horn bracket *B*, as the bottom is rounded up to this point. Having reached the last, or cap piece, the centre *A* may be cut off, and this put on in one piece, which binds the boot together. The horn stays *B*, as shown at *Fig.* 3, which is a front view, may be slipped off, which allows for cleaning off the boot, and preparing for canvasing, which has been explained in former numbers. In applying the canvas to this boot, it will be necessary to have it in two parts, applying it first to the upper division, by beginning at the top of boot, and bringing it down to the recess indicated by the middle line, the canvas on the lower part meeting the canvas on the upper part at the recess. The edges are finished by a neat rattan moulding, which passes around the boot at the recess; the bottom edge is also finished with rattan moulding. The finish of mouldings on brackets *B* and *C* are shown on the corresponding parts of the boot of Landau given in Scale Drafting.

Fig. 2 shows top view of the bottom frame, which is gotten out 1¼ inches thick, the front showing the swell of panel.

Fig. 3 shows the front of horned bracket as framed and paneled, *D* the space for the lid, *E* the sunk panel.

☞Chambers Bro. & Co. inform us that their Bolt Cutters are "*sold subject to being returned within thirty days, C. O. D., if not satisfactory.*" This correction should have been made in advertisement, but was overlooked. These Bolt Cutters are rapidly advancing into public favor.

◆

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WHEEL HORSE & MALLET

SPOKE SHAVE EDITOR

I feel that an apology is due the readers of the JOURNAL, and especially to H. D. F., for not contributing to the last number my due share of matter. Circumstances were such that it was impossible for me to do so, and for the present I shall only have time to bid adieu to Vol. V, with the pledge to the editor that, beginning with No. 1, Vol. VI, I shall be prompt in the discharge of my duties, in so far as my ability will sustain me. With a few exceptions, my department has got along without any exciting discussion, and I assure my opponents that it is a source of pleasure to me that the present controversy has created somewhat of an interest among our readers throughout the wide-spread circulation of the JOURNAL.

To H. D. F. I will say, that while I appreciate the spirit which I conceive animates him in his participation in the all-important subject, viz: "The Construction of the Wheel," I must and do here state that I have investigated several points as made in his arguments, and the more I investigate, the more I become convinced that to practice the same would be detrimental to the durability of the wheel. I will refer to one or two, not that I intend in the present number to dwell upon their objectionable features, but promise to do so in due time.

On page 152, he is reported to have said that very light buggy or sulky wheels should be rim-bound 1-32d part of an inch. To this I record a denial. I also object to closed down joints, or, in other words, I deny the truth of his pressing theory by any other means than the heated tire. I also deny that the dish of the wheel, other than that of the draw of the tire, adds strength to the same; but there is one thing which the wheeler cannot deny, and that is, the theory of H. D. F. is a very nice arrangement for the smith.

I must here state, that in discussing these and other points in H. D. F.'s communications, I must be allowed to bring them up for consideration under their legitimate positions, as they appear in the construction of the wheel; having been regularly schooled at this branch of the trade, I know what it is to take the rough material. I also know what it is to work machinery. I have also had the advantage of repairing wheels that were constructed, I might say, by the best shops in the United States, and I have never let any man's work pass out of my hands, as repaired, without examining well the same. Having had these advantages, and having availed myself of the lessons therein taught, I am not inclined to say *amen* to all that has been said.

Hoping that H. D. F. may place the proper construction on the above, and that we may remain friendly agitators of this all-important subject, I close, by bidding adieu to Vol. V and its numerous readers.

For the Coach-Makers' International Journal.

ALLIANCE, August 8, 1870.

MR. EDITOR:—I have been somewhat amused at reading the letter from Progress, published in the July number of the JOURNAL, and have looked for my August number with considerable anxiety, to see what would be the answer our Spoke Shave editor would make to Progress' question.

Our Wooster friend seems to think he knows it all, judging from the way he closes, and from Victim's answer I verily believe he is afraid Progress has got him. Our Dutchman, who learned his trade in the East, "'way town in old Pennsylvany," a regular wheeler, says "dat man Prokus not knows vat he writes apout; he makes de rim-bound vheel, und squeeze der tuyfel out ter him mit ter tire. Aber er makes him petter pizness."

Now, Vic., here is your text, go for Progress and show him up; perhaps he might learn something. It seems very strange in this enlightened day, after so many years in which wheels have become rim-bound, and been taken to the shop to have the rim sawed out and the tire reset, that a man should advocate rather putting a piece in the rim and putting on the old tire without cutting it, as he would certainly have to do, and then sign himself Progress.

I think I see some old farmer bring his wagon to Progress' shop, the wheels rim-bound to the extent he speaks of, and Progress goes to work with his improved plan and doctors up the job. Wouldn't the sawed felloes split and crack at the ends, and wouldn't the old farmer swear?

Or, if he should succeed in getting the tire on again, (having upset it,) without sawing out the rim, how long would it be until the wagon would be back with spoke tenons working in the rim, and the farmer madder than ever, and make him do the job over again? Verily, our Dutchman was wrong about "te petter pizness;" Progress might fool him once, but it would only make his trade the worse with that man in the future.

I wonder if Progress ever saw a felloe bilged at the spokes, and if he did, what is the reason? We await his answer, when you may hear from us again.

ABRAHAM.

For the Coach-Makers' International Journal.

WOOSTER, O.

MR. EDITOR:—I am surprised there were not more answers to queries in the August number. I had hoped there would have been a general expression. Where is Spoke Shave? Is this a subject he dare not touch, or is he holding back to give me a settler for all time to come?

From his former writings, I should take him to be a man of judgment and considerable knowledge about wheel making, and I have been waiting patiently for his solution of the question, and hope the next (September) number may bring the desired article.

Victim pitches in with his sleeves rolled up.

H. D. F. answers with a good deal of logic, and I must say his articles are very interesting, and in many instances instructive; but I cannot agree with him in all he says.

George R. Groot takes hold of it in the right spirit, namely, if there is any good in it, to get it out, and profit thereby. A man of that disposition, (in the position he occupies,) is bound to build up any establishment.

Before answering the objections, I would prefer hearing from your editor of the wheel department, Mr. Spoke Shave, and if he comes to time this month, I will appear next.

PROGRESS.

STEEL—WELDING STEEL AXLES, &c.

My time is so limited that I cannot do justice to myself or the article, but feeling somewhat indebted to the JOURNAL, and also an interest in its welfare, I will venture to give a few hints in reference to the character of steel, the welding of steel axles, &c. First, then, in answer to S. W. R. In Vol. 5, No. 7, I promised to give my ideas, at some future time, in regard to welding steel axles, which I will endeavor to do in connection with what I may say in this article.

All steel has in it more or less carbon, and the higher the steel the more carbon it contains, rendering it sonorous and brittle, and too high heating will force the carbon from the steel, and the more carbon that is extracted by heating, the nearer it will approach to iron. And again, as the steel increases in heat, its affinity to oxygen is increased, while the lower the heat the less affinity it has to oxygen. Steel, once being overheated, can never be restored to its original state. The axles we use are made of what is called Bessemer steel, which is, in my judgment, nothing more or less than iron filled with carbon. S. W. R. said, in No. 7, that by using iron filings, to assist in welding steel axles, the pores of the steel would open, so that the borax would carry particles of the iron into said openings, in fact would become iron again, which is a mistaken idea; for if the steel is not overheated, it retains the same amount of carbon, and its life is not impaired. Axles may be so highly carbonized as to require a great deal of skill and attention on the part of the smith in order to weld them properly, while some may fail entirely.

The higher the grade of steel the more difficult it is to weld. Iron filings are not objectionable, (as S. W. R. remarked,) but they will not turn steel to iron. To be successful in welding steel axles, everything preparatory to the task must be attended to.

First, then, after having well calcined the borax, add a small quantity of sal ammoniac, say one part to twelve or fifteen of borax, which renders it easier to melt or fuse, and will aid in keeping the steel clean. The borax, opening the pores of the steel, will cause it to melt or fuse before it gets so hot as to burn it. Have the fire clean and free from new coal, to prevent sulphur getting on the steel. Of course, all coal has more or less sulphur in it, and iron or steel cannot be united when there is much sulphur in the fire; for this reason new coal should be excluded from the fire, especially on such extra occasions.

Now, then, having all things ready, compose yourself in the best possible manner, be calm and confident of success, keeping in mind the words of S. W. R. The reason some fail in the attempt to weld steel axles is because they are timid. Some may laugh and scout the idea, but it is none the less true. Self-confidence and self-reliance, together with due caution, will surmount innumerable difficulties; can even astonish kings and queens. Then be calm in the undertaking. Place the ends of the axles in a clean bright fire, heat nearly to a borax welding heat, then remove, upset and scaff, and near the heel of each scaff cut them about half way off with a sharp chisel; then lock them together and set them down with a blow or two from the sledge, after which cover well with powdered borax. Again place them carefully in the fire, gently covering them with coked coal, letting the ends reach just through the hottest part of the fire to prevent their burning off. Let them lie perfectly still, giving a strong but even blast, carefully watching the appearance of the steel as the heat penetrates it, and if the heat does not appear to be even, turn them gently over for a moment or two; and in turning back, if you discover the heat is uniform, let them lie until the heat is raised so high that it is on the point of fusion; or, in other words, as hot as the steel will bear, having, if help is plenty, two men standing ready to use the sledges, and one to take it out. When taken out upon the anvil, place the scaff in the notches, prepared in a manner to keep them from slipping, holding one sledge upon the axle, near the weld, to keep it from any jar to prevent it from uniting, while the smith gives a couple of sharp blows on the extreme end of the lap, and if it adheres, come on with both sledges, and hammer with all power. Let the blows be rapid as possible, until about the size and length desired, which should be left fullest in the centre. These directions followed, one need never be afraid of failure in consequence of a bad weld.

In welding axles you will sometimes find that, when you think you have a good heat, in placing the laps together, a blow, however heavy or light, will only jar them apart, and the lap will possess the appearance of small round particles, like that of meal, which is conclusive evidence of their having been overheated, and when the heat is lost in consequence of overheating, the more difficult it will be to weld at all. This being the case, the easiest and surest way to finally secure a weld will be to place it in the vise, and screw it up tight, after having taken as good a heat as possible. It will adhere in this way when it will not in any other. Then replace it in the fire, and proceed to weld as usual. Still, the best method to remedy a failure, save time and insure success, is to cut off four inches from each stale, and weld on a couple of short pieces of iron, taking a borax heat on the steel, and a good sand heat on the iron, and they will weld with perfect ease; this done, upset and weld in centre, as any common iron axle. In this way you can get a perfect job.

I don't know but it would be well to say a few words in regard to the free use of borax some make in welding steel axles. There has been more trouble among smiths to get good welds, in consequence of using borax too freely, than in any other way. It is very necessary, when welding steel axles, to be cautious, and not use borax so as to allow it to drip in the fire, for the borax and the dirt will immediately settle upon the tewel iron, and form a crust over the mouth, and shut off a portion of the blast, which will often render it absolutely impossible to make a good weld. Borax possesses the property of iron, and when it has thus settled upon the tewel iron, it resembles that of iron. I have heard smiths attribute their bad luck in welding steel axles to there being melted iron covering up the mouth of the tewel iron, when it was nothing but melted borax and dirt, and rather difficult to remove. To get rid of it, all the coal and dirt must be removed from the fire, for the reason, live coals will retain the borax, and just the idea of removing the dirt and cinders from the fire will not remove all the difficulty; and, to a certain extent, it will be only a repetition of the former. To sum up the whole thing in reference to steel axles, they are not worth one straw when iron can be had; they are not reliable, neither durable, and never ought to be used. I consider them a perfect nuisance. One break down may cost the manufacturer two or three hundred dollars, and the buyer much trouble. Steel cannot be case hardened, for the reason it will break, while iron can be case hardened, and be made more durable. I see no consistency in using steel.

PUTTY KNIFE & PAINT BRUSH

P. ALETTE EDITOR

THE ART OF COACH PAINTING.

[CONCLUDED.]

The treatise on coach painting, which we conclude in this the closing number of Vol. V, was suggested by repeated queries regarding the most commonplace matters connected with coach painting. It was begun in No. 7, Vol. IV, and appeared in each succeeding number, in all eighteen articles.

In the second paragraph of our first article we said, "we do not promise to lay down rules to govern the painter under *all* circumstances, or to set up *our* notions in opposition to other painters, who have, through years of toil in the paint room, discovered modes of working different from our own, equally as good, and, it may be, better."

Having, then, in the outset, assumed no superiority, criticisms from practical painters have been received in that spirit characteristic of those who are never too old to learn, nor ashamed to admit that perfection is still afar off.

The "Principles of Coloring" having preceded the "Art of Coach Painting," we did not deem it necessary to dwell at any length on the harmony of colors.

Panel colors vary but little from one generation to another, so that the coach painter readily acquires the art of compounding those shades which are produced by the mixture of a few different pigments. Carriage parts and striping colors present a wider field for the exercise of good taste in coloring, but these, too, are subject to the caprices of fashion—a season of display being often followed by that of the plainest sort of work. Ornamenting has not been noticed, because it does not properly belong to coach painting, it being considered in its truest sense a distinct art; but we have given ornamenting patterns with each issue of the JOURNAL, and as will be seen by reference to the folded extra leaf in the front of this issue, their number has been respectable, to say the least.

Ornamenting has never possessed a definite character in the United States, and therefore but few painters have had the opportunity to become proficient. Heraldic devices have ever been looked upon by our people as smacking too much of a foreign aristocratic style, and with the exception of "the garter," and an occasional unicorn supporting a shield, or escutcheon with the lion replaced by an eagle, our ornaments have been home-made, and in many instances ludicrously inappropriate; but as we have no standard by which to be governed, probably it is as well that no nice distinctions are made, so that a farmer may have a ship under full sail or an anchor on *the back panel of his buggy*, and a sea captain's private carriage be enlivened by a *bull* or *buffalo head* on the crest panel, and each pass along quietly, with uo one to call in question their fitness.

During the continuance of the instructions given, we touched upon the paint shop, as it should be, calling particular attention to light, ventilation, the tools and devices requisite, the proper division of the work, the care of brushes, pencils, &c., economy in the use of stock, the nature of oils, japan and varnish, compound colors, &c., and also carried a coach through from the priming to the finishing coat of varnish. Wherever our descriptions of the workings of the paint room may seem to be slighted, it must be remembered that language is too poor to express certain manipulations which are acquired by daily practice, and which cannot be communicated to another except by or through his powers of imitation. It is one thing to sit down and write out an article explanatory of laying the finishing coat of varnish, and quite another matter for he who reads the explanation to possess himself of that indescribable something which is the result of large experience, and which the writer has no more power of communicating with pen and ink than if he scribbled his paper without properly forming a single word. While this is true, valuable hints may be given, which will tend to greatly improve those who have had no opportunity to see work finished in good style, and in the anxiety to bring their work as near perfection as possible, they will adopt a mode of handling the brush and varnish peculiar to themselves—different in non-essentials, it may be—yet producing what each one desires, a clean, level coat of varnish.

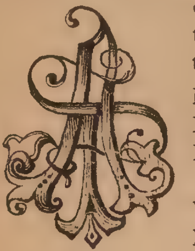
The styles of striping being few in number, (we refer to the form, not to colors,) illustrations were not given. Various mixtures suitable for striping were laid down, giving as great a variety as is generally employed. We do not consider that we have exhausted the subject we have been following, and will in Vol. VI add to it, as ideas may be suggested by others, or as they may recur to us.

Painters who read the JOURNAL regularly, have it in their power to greatly benefit the craft, if they would devote a portion of their leisure to writing out their experience in the use of different colors, varnish, &c., or by asking questions which would lead to controversy.

Whatever value painters may place upon the instructions given, they may rest assured that the writer speaks from actual experience, running through some eighteen or twenty years, in shops both East and West.

In conclusion, we remark that it has been far from an easy task to present the "Art of Coach Painting" in the form we adopted; and, defective as it may be, they who attempt a similar exercise will probably learn that very simple things, done by the aid of tools, are often the most difficult to explain with pen and ink.

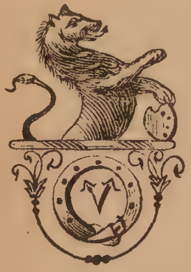
MONOGRAM P S A, which was drawn within a parallelogram, (long square,) measuring one inch by seven-eighths, the letter A having been marked off by the two inclined lines necessary to form the sides of the Roman letter A. The ornamental character was given by curves made according to taste, yet governed by the foundation lines in preserving the position the letter shows in the cut. S followed, being so placed that a portion of it should form the horizontal bar, made use of to connect the sides of an A, and also to form the upper curved portion of the letter P, which is completed by the stem being placed against the middle part of S.



Lay in A gold, shaded with burnt sienna or asphaltum, and lighted with white or straw color. The upper division of S light blue, (ultramarine blue and white,) lighted with orange, (carmine and yellow.) The lower portion of S purple, (ultramarine blue, carmine and white,) also the stem which forms the letter P.

From the light blue of the upper portion of S follow down to purple on the lower part by shades of purple, increasing in depth, and light with orange.

Ornament.—A garter inclosing the initial letter V. Garter surrounded by a vine, the whole surmounted by a demi or half lion, issuing from a wreath. May be laid in all gold, shaded with asphaltum, tinted with carmine, and lighted with light red and white, and colors introduced on the wreath and garter; or the lion may be colored true to nature, and gold and colors used on the remaining portion, according as fancy may dictate.



Libertytown, Md., August, 1870.

Mr. Editor:—Please inform me, through the columns of the Journal, what is the best to do with the remnants and skins of paint cups. A Subscriber.

Answer.—It is the practice with some painters to take the "slush" which has accumulated, and pour it in a kettle, adding raw linseed oil sufficient to soften up the whole mass, and then boil it until the skins, &c., have discharged their fatty matter. Afterward strain the product, and use it for any purpose for which it is fit. It will dry well, and may be mixed with rough paints, to be used on such parts of the work as do not demand anything better—as the insides of bodies, the roofs of standing top work, bottoms, &c. We do not claim that any profit is derived from boiling down "slush." The oil, firewood and time, computed against the value of the product, would not make a very good showing.

The paint shop need not be annoyed by having a great amount of "slush" on hand, if the foreman, or some other man, will see to it that in the daily use of colors and varnish each hand is economical. Black or any other color of which considerable is used, should be ground (in japan only) in a large vessel, and from this removed to the ordinary paint cup, in about the quantity required for coating the work in hand. Turpentine, oil and varnish should never be thrown into the "slush" keg. Cans should be provided for each of them, and when either are gritty or soiled, pour them into the cans, allowing them to settle, and then use them in mixing rough paints.

As in the every day workings of the paint room, there will be of necessity a certain amount of "slush" made, provide two half barrels, and in one scrape only the dried skins, which cling to the cups or pots, and in the other the more liquid refuse. This last may be used up about as rapidly as it gathers; the other is next to worthless.

The "slush" keg, if it could speak, would disclose many mishaps on the part of hands in mixing colors; for, unsightly as it is, it has ever served to swallow up and hide from view these failures, and therefore can claim to be somewhat of a friend to the painter, and he in return is not unmindful of its real worth.

Mansfield, O., August, 1870.

Mr. Editor:—Will you please inform me, in your next month's Journal, of the best and easiest method of handling gold leaf, striping and ornamenting in gold, &c., or can the gold be used as paint, *i. e.*, laid on with camel hair pencil, the same as any other striping color? J. H. T., in his articles on gilding, (in June and July Numbers of Journal,) speaks of using gold, "either in leaf or liquid," but does not tell us how to use it in liquid shape. If P. Allette will please answer as plainly as possible, he will much oblige a subscriber. L. C. H.

Answer.—In handling gold leaf, much depends on the kind of work in hand. Scroll work, and all large patterns and plain surfaces require only that the book be opened and a whole leaf put on at once; this is repeated, allowing each leaf to overlap the other about an eighth of an inch, and when sufficient has been applied to cover the work, rub it down with raw cotton or rabbit's paw, being careful not to get any size on them. Small gold ornaments, less than the size of a leaf of gold, we gild direct from the book, any pieces of gold worth saving is allowed to drop back into the book when we remove the loose gold. To do this, without wrinkling or crushing the remnants, the leaf must be handled gently, and be broken away from the size around the edges, placing the book directly under the ornaments and catch it as it falls. For striping and lettering, the leaf should be cut a trifle wider than the sizing, and applied with a "tip" or from the leaves of the book, cut of a proper width. To handle gold leaf, it is well to provide a gold cushion, gold knife and a tip. The cushion is designed to hold the leaf while being cut, and during the operation of applying the leaf with the tip. The knife is a thin blade of steel, set in a handle, and made for the purpose and for no other. The tip is made by inserting camel's hair between two pieces of pasteboard, and should be two and a half or three inches wide. The gold is removed from the book to the cushion by turning back a leaf and exposing the gold, then invert the book and press the gold on the cushion. If it should wrinkle, a puff of the breath directly over it will straighten it. The knife should be made to do its work by one cut. The tip may be drawn across the hair or beard, and excited by friction, or be slightly greased.

In using the tip, take up as much gold as it will carry, first placing on the size the piece at the outer end of the tip, and following down toward the heel. By practice, leaf may be laid on very rapidly with a tip, especially on fine lining, but there are other methods employed which work fully as well if not better. The most approved of these is to take an empty gold book, and draw a leaf of it across the hair or beard, (or apply a minute portion of viscid matter in any other form,) and press this greased leaf upon the gold. It will adhere throughout its surface and may be cut to any size required, and applied more rapidly than by using the tip. Every leaf of gold requires to be thus treated, when they may be laid together and several cut at once.

Striping and ornamenting in gold requires practice in the mixture and use of sizing, as the gold leaf is rendered brilliant, or dull and lifeless, according as the sizing is clean, thin and evenly laid, or gritty, thick and laid on with overlapping edges. *Size*, made of either varnish, or fat oil, should be run on very thin, and the leaf be laid when the size retains but a slight tack. Varnish size must be gilded while the tackiness is more decided than that of fat oil, for varnish, after it begins to set, soon forms an outer pellicle, or thin skin, which encloses the under body of the varnish, and prevents the proper adhesion of any kind of leaf, or even bronze. Fat oil dries slowly, and retains a tackiness sufficient to take the leaf, even when it requires pressure to cause the leaf to adhere. When the gold has been laid, it may be rubbed down with clean raw cotton, until it shows a bright even surface.

Gold powder or bronze, may be laid on with a camel hair pencil, and to do it, only requires that the bronze be mixed in a vehicle containing as little acid as possible.

In the every day routine of the shop we use raw oil and japan, japan gold size, boiled oil and varnish, either of which will answer the purpose. We prefer, however, raw oil and a small portion of japan, in which we rub up a little orange chrome and add the bronze in the proportion of two-thirds bronze to one-third color, or use the bronze clear, mixed in an oil drier or varnish. The Bessemer gold paint is now very popular, and comes prepared for immediate use.

Bronze is not suitable for ornamenting, but striping and fine scrolls will admit of its use. There is no secret connected with its application, and "J. H. T." did not mention the method of using gold in a liquid form, because it was not a part of his purpose to touch on it at that time. Having prepared your work for striping, obtain a small stone ware or porcelain vessel, mix the bronze as directed, and when using the striping fluid stir it occasionally in order to keep the particles of bronze afloat, for the pencil must take a like quantity of the mixture charged with the same amount of bronze (as nearly as possible) at every dipping, to produce stripes of equal brilliancy. Do not be disappointed if, when your work is finished, you find it inferior to gold leaf. Bronze used in this way, answers a very good purpose, saving the time and trouble of sizing in; but to assert that it produces as good work as gold leaf, would be to mislead those who have not seen it. Bessemer's gold paint is put up in packages, containing two ounce bottles; one containing fine gold bronze, the other a liquid in which to mix it. Price, $1.25. Fine gold bronze is worth $1 an ounce.

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SHEARS, NEEDLE & TACK HAMMER

T. ACKS EDITOR

THE STEEL TUBULAR BOW SOCKETS.

Since the publication of my "July experience" appears to have drawn forth several opinions of the above named article; and since your correspondent, W. B. C., appears to have construed my remarks into an objection on my part, to the article, it may be proper for me to state that my "experience" has been increased since writing that letter, and while I am very glad to have it admitted that my article pointed out improvements in the "bow sockets," and was evidently received in *good part by the manufacturers, as it was intended it should be* still, if they, the parties most interested, objected to my criticisms, I should still have felt that I had only done my duty to the proprietor of this JOURNAL, and to the public who read it.

First, because MR. WARE demands of me a fair candid opinion on all questions or improvements that are offered, where they relate to the branch which I have had the honor of writing for; he pays me for doing this, and insists that it shall be done conscientiously, looking to the interests of both parties, but not favoring one to the detriment of the other.

Secondly, the public subscribe and pay for this JOURNAL, that they may keep well and thoroughly posted on all matters relating to the trade; that they may thus be enabled to keep up with the spirit of progress as developed in this business of carriage making, and the wonderful success that has attended its publication goes far to prove that the public, whether employer or journeyman, have full confidence in the conduct of the JOURNAL. And now, again, speaking for myself, I do not, by any means, pretend to suppose that I am infallible, or that because I express an opinion, do I imagine that it must be followed, nor do I pretend to say that I am not as liable to err as "any other man." Oh, no, on the contrary; but, when I am asked for an opinion I give it fairly, and just as I am impressed; if it pleases the parties interested and the public, *'tis well,* and if it does not, *'tis well also*—both parties are free agents, and they are at liberty to adopt my views, or not, as may best suit them; but we, as journalists and faithful chroniclers, have done our duty, and feel satisfied with the results which thus far go to prove that "honesty is the best policy," and pays in the long run.

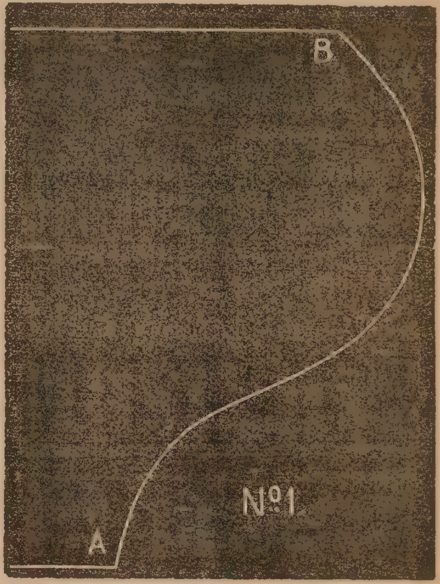
I stated in the first part of this letter that my experience had been increased. Well, I have used several sets of the "bow sockets," and the last lot were a decided improvement on the first I used, the principal being the substitution of the lapped joint for the soldered one, and the Philadelphia slat iron ends for the former "bow cap" finish; but there is room, I think, for a further improvement in the get up of the slat iron ends; those I used leave the two centre bows too far apart, they are not bent to the proper position—(please note this Messrs. Topliff & Ely)—and then the set of them is a little faulty, they do not appear to have been bent to fit one over the other, as in the Philadelphia full slat irons, but when on, two of the bows are wider than the other two. The japanning on those we received was not good, they had evidently *been packed before they were quite dry,* and the paper had stuck fast, so that when pulled off the sockets were very rough and coarse looking.

I like the sockets more each time I use them, and they are decidedly in favor with the customers of our establishment. We build almost all ordered work, and the majority of our patrons are wide awake to everything new. I am not one of those who rush into ecstacies over an article because it is something new or fresh. I always test its merits pretty severely before I receive it as a real improvement; these bow sockets I pretty thoroughly tested, and I am satisfied they are just what was wanted.

BUZZARD'S ROOST, PA., August, 1870.

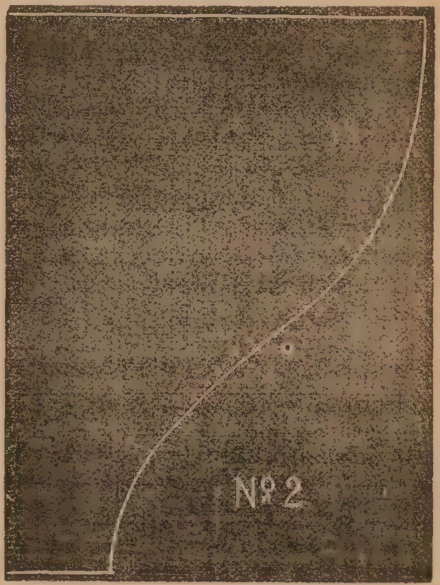
MR. EDITOR:—I would like to inquire of our kind friend, Mr. T. Acks, the best plan to cut the mitre on the corners of stick-seat rolls for a stick-seat buggy, the back and front *square* corners, and also the method of cutting the leather for a round front corner. I have worked out a way of my own, but think that there must be a better plan, and if so, I am anxious to take a step forward by learning it. I am aware that stick-seats are out of date; but here, in Pennsylvania, we all cling to the "irrepressible" buggy, and among them we occasionally meet with an old-fashioned stick-seat requiring to be retrimmed. If Mr. T. Acks can throw sufficient light on the subject mentioned to penetrate and illuminate the dark recesses of a Pennsylvania Roundhead, I promise, in return, to make my politest bow to *Mrs.* T. Acks, and hope that the little rosy-faced "3 *and 4-ounce Tacks*" may soon become very useful in trimming bodies; and further, I would bestow on him the best wishes of NOVICE.

In reply to your question of how to cut the mitre of a roll for front and back corner of stick-seats, and also your request for a rule by which you could cut the leather for a roll on a round (front) corner stick-seat, we offer you patterns which, with a little modification to suit each particular seat you may have to trim, will probably answer your purpose.



No. 1

No. 1 is for the mitre of a front corner. Presume you wish to put on a 3-inch roll. Lay

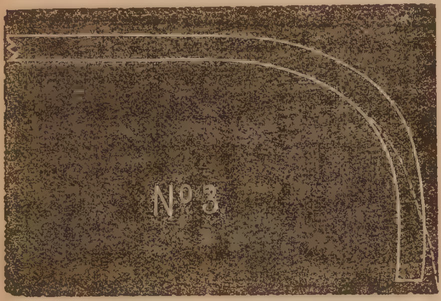


No. 2

the pattern to the rail, and if the point B touches the top corner, and the point A the lower joint of the rail, *go ahead;* if not, cut a new pattern by this, but altered to reach the upper and lower points of joint of the rail.

No. 2 is for the back corner, a 3-inch roll also; the same directions apply as in *No.* 1. When properly fitted, baste a narrow welt to one side of each mitre, then lay the other side to it, and stitch with two needles.

No. 3 is a sketch of a round front corner. Say you wish a 3-inch roll. Cut a paper pattern of the sweep or bend of the rail, then cut the leather $1\frac{3}{4}$ inches, *straighter, or with less bend* than the rail; the object gained by this is, that if you tried to put on a roll with leather, cut the exact sweep of rail, you would have too much fullness, or too many wrinkles on top of the bend. By cutting in straighter you draw all that surplus leather down, and you can thus get a smooth roll on. You must remember one thing, that the putting on of those kind of rolls is a little difficult for a "novice."



Hoping that the information here offered may be acceptable in enabling you to surmount your difficulty, I am, yours, T. ACKS.

Periodicals.

"ZELL'S POPULAR ENCYCLOPEDIA AND UNIVERSAL DICTIONARY," monthly part No. 40 received. Price 50 cents each. 17 and 19 South Sixth street, Philadelphia.

SCIENTIFIC AMERICAN, (weekly.) Price $3 per year. 37 Park Row, New York.

THE WORKSHOP, (monthly.) Price $5.40 per year. E. Steiger, 22 and 24 Frankford street, New York.

PETERSON'S LADIES' NATIONAL MAGAZINE, (monthly.) $2 per year. 306 Chestnut street, Philadelphia.

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AMERICAN ARTISAN, (weekly.) $2 per year. 189 Broadway, New York.

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PHRENOLOGICAL JOURNAL and PACKARD'S MONTHLY. $3 per year. 389 Broadway, N. Y.

MECHANIC AND INVENTOR, (monthly.) 50 cents per year. No. 1 Arcade Buildings, Detroit, Michigan.

THE INDEPENDENT, (weekly.) $2.50 per year. H. C. Bowen, Box 2787, N. Y. City.

MANUFACTURER AND BUILDER, (monthly.) $1.50 per year. 37 Park Row, New York.

CHILDREN'S HOUR, (monthly.) For the Young. $1.25 per year. Chestnut street, Philadelphia.

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Short Advertisements inserted in this column at 25 cents per line each insertion.

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WANTED.—A purchaser for our shops, tools and unfinished material. Room to work twelve hands, and room to enlarge. Business well established; good location, on the railroad in Southern Pennsylvania. Possession given by December 1st, 1870. For further particulars, inquire at this office.

WANTED.—To know the whereabouts of John Parkes, Bell Parkes and Charles Harrison, who came from Dublin, Ireland, together, some time since. Any information about them will be gladly received at this office, and sent to their relatives.

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☞ Names will be inserted under any of the following headings, for Volume VI, at ONE DOLLAR each name. Those marked with an asterisk see advertisement in the Journal.

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*MINETT & CO., 60 Pearl st., N. Y., & 16 N 12th st., Phila.
PARKER & GILLESPIE, 228 Pearl st., New York City.
*SCHRACK, C. & CO., 152 North Fourth street, Phila.
*SMITH, EDWARD & CO., 161 William street, N. Y.
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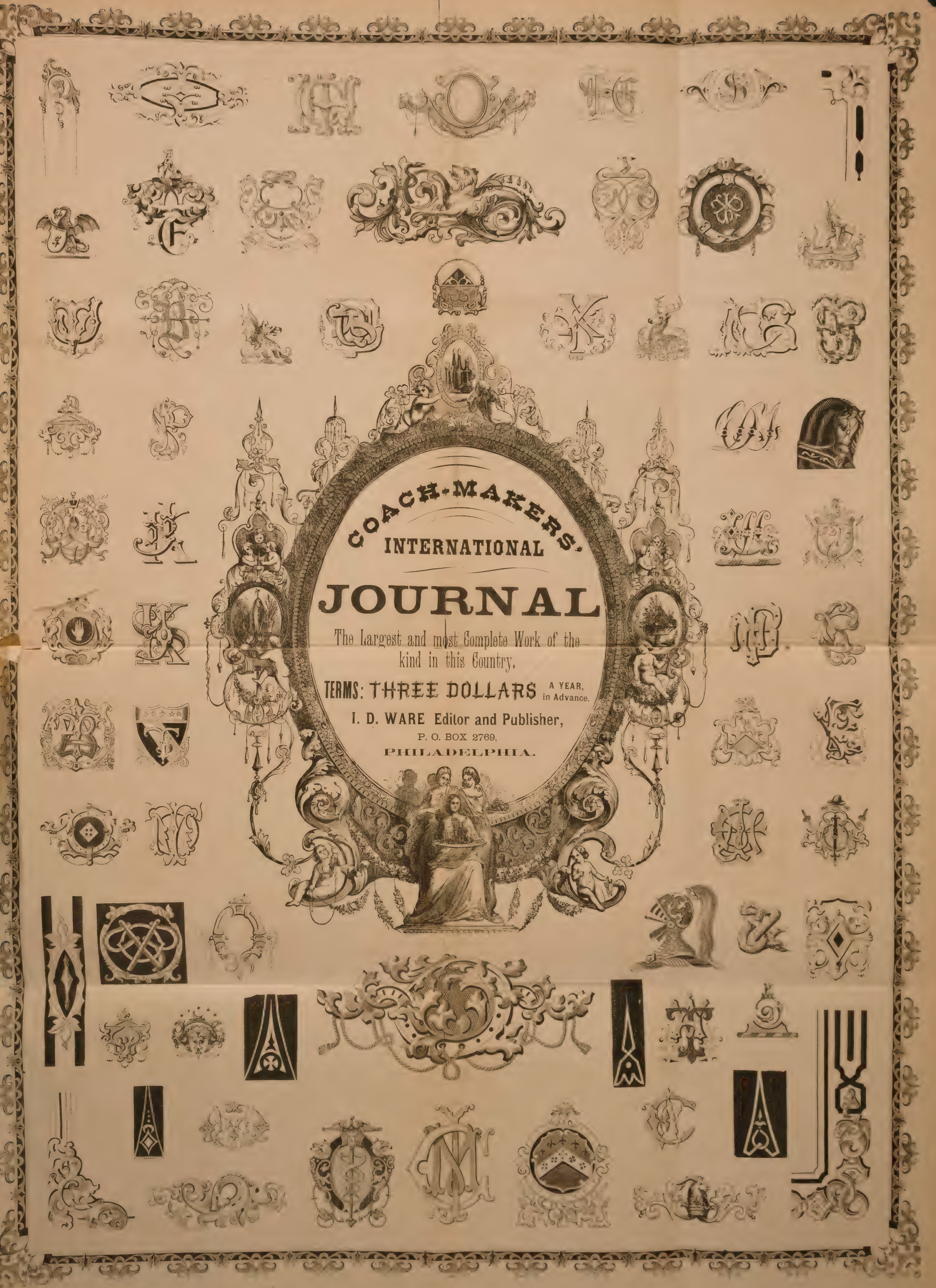

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CASH

Prices Current of Carriage Materials.

REVISED AND CORRECTED MONTHLY BY
SCOTT & DAY, NO. 38 NORTH THIRD STREET.

PHILADELPHIA, August 20, 1870.

Apron hooks and rings, per gr., jap., $1.20 to $1.50; sil., $9.
“ snaps, silvered, per gross, $5.25.

Axle-clips, Philadelphia List price, per doz.; No. 0, 70c.; No. 1, 70c.; No. 2, 70c.; No. 3, 78c.; No. 4, 97c.; No. 5, 97c. 45 per cent. discount.
Forged, Philadelphia List price, per doz.; No. 0, $1.05; No. 1, $1.05; No. 2, $1.05; No. 3, $1.10; No. 4, $1.20; No. 5, $1.30. 15 per cent. disc't.
Seward's patent, nett, per doz., 5-16, No. 1, 80c.; No. 2, 86c.; No. 3, 92c.; No. 4, $1.00; No. 5, $1.15.
Seward's Patent, per doz., ⅜, No. 1, $1.12; No. 2, $1.25; No. 3, $1.40; No. 4, $1.70.

Axles, long, com., per lb., 7c.; leath. washer, 7½c. per lb.
“ Short, solid collar, per sett, ⅞ and 1 in., $3.25; 1⅛, $3.75; 1¼, $4.50; 1⅜, $5.50; 1½, $7.

Axles, Carswell's Wilmington, or Brinton's Phila. C. H Short, plain taper, ⅞ and 1 in., $4.00; 1⅛, $4.50; 1¼, $5.50; 1⅜, $7.25; 1½, $9.25.
“ Improved taper, ⅞ and 1 in., $4.50; 1⅛, $5; 1¼, $6.25; 1⅜, $8; 1½, $10.
“ Half pat., ⅞ and 1 inch, $5; 1⅛, $5.75; 1¼, $7.25; 1⅜, $9; 1½, $11.

Axles, Long half pat., ⅞ and 1 in., $6.00; 1⅛, $7.00; 1¼, $8.75; 1⅜, $10.75; 1½, $13.50.
“ Plain long taper, ⅞ and 1 in., $5.00; 1⅛, $6.00; 1¼, $7.50; 1⅜, $9.25; 1½, $12.

Axles, Improved taper, long, ⅞ and 1 in., $5.50; 1⅛, $6.50; 1¼, $8.25; 1⅜, $10; 1½, $12.75.

Bands, silvered, rim, light, per sett, 3 inch and under, 85c.; larger sizes advance 7c. per sett for ⅛ of an inch. Heavy rim, 3 in. and under, 95c.; 10 cents per sett advance per one-eighth. Extra heavy rim, 3 inch and under, $1.35; 10 cents per sett advance per one-eighth. Philadelphia bands, same prices as rim. Central Park, silvered inside, 3 inch and under, $1.50 per sett; full silvered, do., 3 inch and under, $1.65. Close plated on composition rim, light, 3 inch and under, $1.81; do. heavy, 3 inch and under, $2.20; do., extra heavy, 3 inch, $2.48; 10 cents per sett advance for each one-eighth. Turned iron rim bands, 1½ inch deep, 3 inch and under, 40c.; do., 1¾ in., 3 inch and under, 45c.; large sizes, 5c. per sett advance each one-eighth.

Basket-wood imitation, for panels, per foot 60c.

Buttons, japanned, per gr. 15c; great gr., $1.75; silvered, per gr., 40c.

Bolts, Phila., 45 per cent. discount from list. Clip King bolts, per dozen, Nos. 1 and 2, $3.25.

Buckles, japanned, W. H. S., per gross, ⅝ inch, 50c.; ¾, 63c.; ⅞, 80c.; 1 inch, $1.05.

Buckram, per yard, 15 to 18c.

Carpet, per yard, Brussels, $1.50; Velvet, $2.30 to $2.50. Oil cloth, per yard, ⅞, 45c. to 65c.; 4-4, 45 to 80c.

Castings, mall, per lb., 13c.

Cord, seaming, per lb., 25c.

Cloths, lining, per yard, indigo wool-dyed, $1.75; Fast Colored Zephyrs $1.50; Browns, same price.
“ body, per yard, indigo wool-dyed, $2.50 to $3.50.

Coteline, per yard, $4 to $8.

Curtain frames, japanned and silver, $1.00 to $1.38 per dozen.

Damask, German cotton, double width, per piece 30 yds., $15.00; do., Union, $28; English worsted, from $1.50 to $2 per yd; Rattinet, 50c. to 70c. per yd.

Dashes, buggy, per dozen, rough, $18; silver plated, $27. Plated dash collars, per dozen, ¼ in., $3.50; 5-16, $3.50; ⅜, $4.

Door handles, per pr., silvered, 40c. to $1.25; real sil. shell, 56c. to $2.

Drugget, felt, per yard, $1.05 to $1.75.

Enameled cloth, per yard, muslin, 5-4, 30c.; 6-4, 45c.; drilling, 5-4, 42c.; 48 inch, 45c.; 6-4: 58c.; duck, 5-4, 55c.; 50 inch, 58c.; 6-4, 65c.; pat. tan back muslin, 5-4, 40c.; do., drill, 5-4, 55c.; 48 inch, 60c.; flock drill, 48 inch, 90c.; do., muslin, 80c.; vul. rubber drill, hea., $1.25; imitation rubber drilling, heavy, 48-inch, 50 cents.

Felloe plates, wrought, per lb., 13c.

Fifth wheels, Cincinnati pat., per doz., ⅝, $14; ¾, $15; N. York pat., ⅝, $11; ¾, $12.

Fringes, per dozen yards, Mohair, 2 inch, $2; 3 inch, $3; 4 inch, $4; Silk, 1½ inch, $1 to $2; 2 inch, $1.50 to $2.50; 2½ inch, $1.75 to $3; com. worsted, 45c.; rug or carpet fringe, 6c. to 12c. per yard.

Hair, curled, per lb., H. & B., 19c.; No. 2½, 33c.; hog, 17c.; best picked, from 35c. to 50c.

Jump-seat irons, Mellenger's patent, single seat, 10 inch. $2.75; 12 inch, $3, per set; combination, one or two seats, $5.75, per set.

Knobs, per gross, common japanned, 40c.; fine japanned English, $1.50; silver capped, 60c.; silvered, $1.50; do., English, $3.50.
“ Button-holes, pat., metal edge, gum centre. A new article; for quickness and simplicity of application it has no equal Price, per gross, $3.75.

Laces, broad, per yard, worsted, 31c.; do., silk stripe, 2½ inch, 25c. to 40c.; silk broche, 2¾ inch, 75c. to 90c.; narrow worsted, 7½c.; silk stripe, 9½c.; silk barred, 12½c.

Lamps, per pair, fine, $15 to $30.

Leather, per ft., dash, No. 1, 15c.: do., No. 2, 13c; railing, 23c. and collar, 24 cents; enameled top, No. 1, 24c.: do., No. 2, 22c.; enam. trimming, 22c.

Loops, fine japanned, metal pockets, for curtain strap ends. A recent improvement which meets with great approbation, and will supersede anything of the kind heretofore used. Sold at $3.50 per gr.

Mouldings, plated, per foot, ¼ to ½ inch, 12c. to 18c.; lead, door, per lb., 20c.; cane, dressed, per M. feet, 3-16, $5; ¼ in. $8.50; 5-16, $10.50; ½ inch, $12.

Machines, hub boring machine, each, small, $18; med., ex. jaws, $21; large, $24.
“ spoke ten. machine, each, sm., $15; large, $25.
“ bolt cutting machine. each sm., No. 1, $12.50; No. 2, $15; No. 3, $17.50; No. 4, $20.

Machines, pat. adjustable hollow auger, per doz., No. 1, cuts ½ to ¾ inch, $30; No. 2, cuts ¾ to 1 inch, $30; No. 3, cuts ½ to 1 inch, $40.

Moss, per lb., 10c. to 15c.

Name plates, per do., en., German silver, $4 to $4.50.

Nails, lining, japanned and silver, 5c. per paper of 100; ex. quality, 16c. per gross; solid head, English, per gross, $1.62; extra silver band, 20c. per gr.; ivory head, per gross, 35c.; do., pin head. 33c.

Ornaments, real silver, $2.50 to $4.50 per gross.

Sand paper, flint, per ream, best, 0 to 2, $4.50; 2½ to 3, $5.

Screws, Eagle, gimlet point, wood, 40 per cent. discount from list. Ivory head, $5.50 per gross.

Screw Clamps, per dozen, patent No. 1, 2½ inch, $5.50; No. 2, 3½, in., $7.50; No. 3, 4½ in.,, $9; No. 4, 5½ in., $11.
“ improved No. 0, $5.50; No. 1, 3½ inch, $5; No. 2, 4½ in., $7.50; No. 3, 6 in., $12; No. 4, 10 in., $20.

Screw Clamps, common, No. 0, 3 inch, $5.25; No. 1, 2½ in., $4.25; No. 1½, 3 inch, $5; No. 2, 4 inch, $7; No. 3, 5½ in., $8.
“ Gibbs' pat., 4 in., $5.50; 6 in., $6.50; 9 in., $7.50; 12 in., $8.

Scrims for canvassing, per yard, 14c. to 18c.

Shaft couplings, Smith's, per dozen pair, No. 1, plain black, $8.55; do., Bright, $10.12; No. 2, plain black, $7.88; do., Bright, $9.45; New York, pattern black, $10.58; do., Bright, $12.38; Baltimore pattern black, $11.25; Bright, $13.05; Nos. 1 and 2 Philadelphia pat. black, $13.75; Bright, $16.25.
“ Wilcox's light, 1 in., $12.75; do., heavy, 1 in., $13.25; 1⅛ inch, $14.

Shaft couplings, Savage's, No. 1 plain black, $8.55; do., bright, $10.12; No. 2 plain black, $7.88; do., bright, $9.45.
“ Clapp's patent, $1.50 per sett.

Shaft rubber, per dozen pairs, $1.50.

Shaft sockets, silvered, per doz. pairs, plain, ¾ in., $1.50; ⅞, $1.62; 1 inch, $1.75, 1⅛, 2.10; $1¼, $2.25.

Shaft Sockets, ball, ¾ inch, $1.85; ⅞ $2.00; 1 inch, $2 15; 1⅛, $2.50; 1¼, 2.65.
“ close plated on brass. ball, ¾ inches, $5; ⅞, $5.75; 1 in., $6.25.
“ close pla., ex. hea., plain, ⅞, $8; 1 inch, $9.

Sockets, pole, silvered, per dozen, plain, 1¼ inch, $3.38; 1⅜, $3.85; 1½, $4.30.
“ ball, 1¼ inch, $4.00; 1⅜, $4.50; 1½, $5.
“ neck yoke, silvered, per dozen pairs, ¾ inch, $5.50; ⅞, $6
“ Warburton & Bendir's Scroll Ends, manufacturers' prices, 35 to 45 per sett, 4 pieces; for perch and headblocks, 20c. per pair.

Slat irons, wrought, Philadelphia pat., per dozen setts, 4 bows, $7.00; 5 bows, $9.00.

Slat irons, wrought, N. Y. pat., per doz. sets, 4 bows, $13.50
“ Bidwell's pat., 4 bows, per sett, rough, short, 50c.; 1 long iron, 56c.
“ plated, short, $1.20; 1 long iron, $1.37
“ japanned, short, 55c.; 1 long iron, 62.

Springs, Rowland's Buggy, per lb., 1½ inch and wider, black, 15c.; Bright, 16c.; 1¼ inch, 1c. per lb. more.
“ Rowland's bright cast steel. 1¼, 3 and 4 plates, not shorter than 33 inch, 22c.; 1½. 3, 4 and 5 plates, not shorter than 33 inch, 21c.; shorter than 33 inch, per lb. extra, 3c.
“ Bright oil-tempered, per lb., 1¼ inch, 19c.; 1⅜ inch, 18c.
“ Spring Perch Co.'s, tempered, 28c. to 30c. Bridgeport and Tomlinson Spring Co.'s prices same as above.

Stump joints, rough, per doz., ½ in., $1.35; 9-16, $1.50: ⅝, $1.70.

Stump joints, long plated, per doz., ½ inch, $6; 9-16, $6; ⅝, $6.50.

Tassels, holder, per dozen, worsted, $3 to $5; silk do., $5.50 to $12.

Tassels, Curtain, silk, per doz., $3 to $4.50; acorns, per doz., $1.38.

Top holders, Thomas patent, buggy, $5 each; extension, $7 each.

Top props, silvered, per sett, common, 31c.; extra, 60c. to 80c.; Thomas' patent, mall., with plated nuts and rivets, $1 .25; Thomas' wrought with plated nuts and rivets, $1.35.

Thread, pat. linen, Stuart's, per lb., No. 25, $1.25; No. 30, $1.45; No. 35, $1.60; No. 40, $1.80.
“ Shoe, H. B., per lb., No. 10, 60c. to 82c.; No. 3, $1.00 to $1.10; No. 12, $1.30.
“ dark blue, per lb., No. 10, 90c.; No. 3, $1.15; No. 12, $1.35.
“ machine, Marshall's, Shrewsbury, black, No. 432, $2.50; No. 532, $3; No. 632, $3.35; white and black same price.

Thread, machine, Barbour's, fancy colors, No. 432, $2.80; No. 532, $3.30; No. 632, $4.00; white, 40c. per lb. extra.

Thread, machine, Barbour's, on spools, fancy colors, No. 25, $1.45; No. 30, $1.60; No. 35, $1.80; No. 40, $$2.10; white, 25c. per lb. extra.

Turned collars, per doz., 10 per cent. discount from list, ¼. 90c.; 5-16, 93c.; ⅜, $1; 7-16, $1.25; $3. $1.50; 9-16, $1.70; ⅝, $2; ¾, $2.25; ⅞, ½,

Tufts, per gross, common worsted, 18c.

Twine, tufting, per lb,, No. 16, 50c.; best mattress, 85c.

Whip sockets, hard rubber, per dozen, No. 1, $8.50; No. 2, $9; No. 3, $9.50; No. 10, $5.

Whip sockets, soft rub., per dozen, No. B, $3.50; No. C, $3.75.

Whip sockets, improved, all black, per dozen, $1.50; black, silver top, $1.75.

Whip sockets, imp., cov. and stitched, per doz., $2; sil. top, $2.25.

Whip socket fasteners, $3.00 per dozen pairs.

WOOD-WORK.

Bows, per bundle of 4 setts, long wagon, $4.50; buggy, $3.50; post, 2 setts in bundle, $3.00.

Felloes, hickory, per sett, 1, 1⅛, 1¼, $2.25; 1⅜, $2.75; 1½, $3.25; double extra, 50c. per set on these prices.
“ ash, red oak and common hickory, per sett, 1,
“ 1⅛ 1¼, $1.25; 1⅜ $1,50; 1½, $1.75.

Felloes, white oak, per sett, 1, 1⅛, 1¼, $1.50; 1⅜, $1.75; 1½, $2.13.
“ sulky, ash and red oak, per sett, 1, 1⅛, 1¼, $1; 1⅜, $1.13.

Hubs, morticed gum, No. 1, 4 to 6 inches diameter, 90c. per set; extra, 4 to 6 in. diam., $1.10 to $1.40 per set, dou. ex., 4 to 6 inches diameter, $2 to $2. 25 per set.

Poles, hickory, per dozen, rough, $12: finished, $16.

Shafts, buggy, hickory per dozen pair, rough, 1½ in., $11; 1¾ in., $12; finished do., $12; Sleigh, $21.
“ sulky, hickory, per dozen pair, rough 1½ inch $12; 1¾ inch, $16; finished do., $60.

Shafts express, hickory, per doz. pair, rough, bent, heel $36; straight heel, $30; grocery, $20.

Sleigh stuffs, bent cutter stuff, single seat, $3.50 per set;
“ “ double “ $4.50 “

Sleigh runners, oak and ash, per pair, 1¼ to 1½ in., $1.25.

Seat rails, whole, hick., $7 per doz.; lazy backs, $8 per doz.

Seat arms, per dozen pairs, $1.25.

Spokes, buggy, hick. per set, 1½ in and under, No. 1, $3; extra, $3.60 to $4.50; double extra, $4.50 to $6.00.

Seats, carriage, patent bent; back, rail and arms in one solid piece each, finished, $4; unfinished, $1.38.

Wheels, finished, hickory, buggy, $10 to $18 per sett.

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VARNISHES—finishing body, extra pale, $5.00; finishing body, No. 1, pale, $4.50; finishing body, No. 1, hard drying, $4.50; carriage, No. 1, light color, $4; carriage, No. 2, $3.50; rubbing light color, $3.50; mixing or color, $2.75; Harland & Son's English, $9.00; Noble & Hoar's English, $7.75; black enamel English for carriage tops, $7.25: black enamel American for carriage tops, $3.

PIOTROWSKI'S PERMANENT WOOD FILLING, $5 per gallon.

PAINTS—Black—Raven's Wing drop, per lb., 40c.: refined English drop, 30c.; No. 1 English drop, 25c.; No. 1 pat. drop, 20c.; Eddy's refined lamp, 40c.; extra coach-painters' lamp, 30c.; refined coach-painters' lamp, 25c.; Germantown, 18c.

Blues—Pure Chinese, per lb., 90c.; No. 1 Prussian, 55c.; No. 2 Prussian, 40c.; Ultramarine, No. 0, $1; No. 1, 75c.; B, 50c.; celestial, 12c.

Greens—Pure chrome, L. M. & D. shades, per lb., 18c.; extra dark, 30c.; bronze or quaker, 20c.: pure emerald, 40c.; pure Paris, 40c.; Brunswick, 10c.

Reds—Best carmine, No. 40, per ounce, $1.25; fine crimson or claret lake, per lb., $3.00; chatamuck or carmine lake, $1 per lb.; rose lake, 75c.; best rose pink, 20c.; pure Indian red, 20c. Tuscan red, 40c. per lb. (A very rich deep red for striping and fine carriage painting.) Vermillions—English pale, $1.20; deep, $1.15; Ger. gotn. pale, $1.15; deep, $1.15; Chinese, $1.20: Trieste, $1.20; Italian, 45c.; American, 30c.; Eng. Ven., 5c.; red lead, 14c.

Whites—Pure lead, per lb., 12½c.; Colorado lead, 11½c.; Nevada, 10c.; Dakota, 9c.; Cremnitz, for striping, 35c.; whiting, 4c.; pure dry lead, 13c.

Yellows—Pure chrome. L. M. & D. shades, per lb., 30c.; Orange do., 45c.; Brandon, 4c.; French ochre, 5c.; English stone ochre, 12c. English chrome, $1.10; French do. $1.20.,

SUPERIOR WET COLORS, (Masury's)--Superfine ivory drop black, in oil, 50c.; do. in japan, 60c.; orange chrome, 50c.; coach painters' dark green. 50c.; lemon chrome, 50c.; fine drop black, in oil, 35c.; Indian red, 40c.; pure Prussian blue, $1.20; coach painters' medium green, 50c.: golden ochre, 25c.; deep orange chrome, 50c.; coach painters' light green, 50c.; medium chrome, 50c.; Italian burnt sienna, 37c.; burnt Turkey umber, 35c.; Italian raw sienna, 37c.: genuine Vandyke brown, 45c.; raw Turkey umber, 35c.; royal red, 25c.

Miscellaneous—Drying Japan, $1.75; turpentine, 55c.; linseed oil, $1.10; English filling, per lb., 14c.; English rubbing stone, 12c.: pumice stone, ground and lump, selected, 8c. Extra fine gold striping bronze, $1 per oz.; chamois, 50c. to $1 each.

BRUSHES.

Paint—0, 65c,; 00. 75c.; 000. 85c.; 0000, 95c.

Varnish—0, 75c.; 00, 85c.; 000, 95c.: 0000, $1.10.

Badger hair flowing, per inch, $1; Fitch do., $1: Camel's hair striping pencils, assorted, per dozen, 45c.: sable do., $4; Thum's celebrated elastic and half elastic varnish brushes.

Best Paint Mills—Large, $8: small, $6.50.

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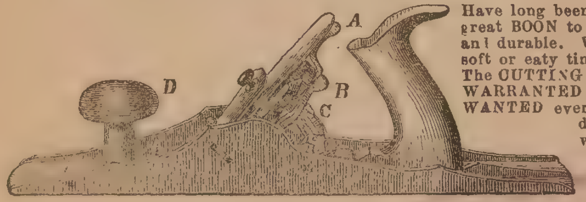

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